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* * * * * * * * * * Welcome to STN International * * * * * * * * * *

| | | |
|---|---|---|
| NEWS 1 | | Web Page URLs for STN Seminar Schedule - N. America |
| NEWS 2 | | "Ask CAS" for self-help around the clock |
| NEWS 3 | DEC 21 | IPC search and display fields enhanced in CA/CAplus with the IPC reform |
| NEWS 4 | DEC 23 | New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/ USPAT2 |
| NEWS 5 | JAN 13 | IPC 8 searching in IFIPAT, IFIUDB, and IFICDB |
| NEWS 6 | JAN 13 | New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to INPADOC |
| NEWS 7 | JAN 17 | Pre-1988 INPI data added to MARPAT |
| NEWS 8 | JAN 17 | IPC 8 in the WPI family of databases including WPIFV |
| NEWS 9 | JAN 30 | Saved answer limit increased |
| NEWS 10 | JAN 31 | Monthly current-awareness alert (SDI) frequency added to TULSA |
| NEWS 11 | FEB 21 | STN AnaVist, Version 1.1, lets you share your STN AnaVist visualization results |
| NEWS 12 | FEB 22 | Status of current WO (PCT) information on STN |
| NEWS 13 | FEB 22 | The IPC thesaurus added to additional patent databases on STN |
| NEWS 14 | FEB 22 | Updates in EPFULL; IPC 8 enhancements added |
| NEWS 15 | FEB 27 | New STN AnaVist pricing effective March 1, 2006 |
| NEWS 16 | FEB 28 | MEDLINE/LMEDLINE reload improves functionality |
| NEWS 17 | FEB 28 | TOXCENTER reloaded with enhancements |
| NEWS 18 | FEB 28 | REGISTRY/ZREGISTRY enhanced with more experimental spectral property data |
| NEWS 19 | MAR 01 | INSPEC reloaded and enhanced |
| NEWS 20 | MAR 03 | Updates in PATDPA; addition of IPC 8 data without attributes |
| NEWS 21 | MAR 08 | X.25 communication option no longer available after June 2006 |
| NEWS 22 | MAR 22 | EMBASE is now updated on a daily basis |
| NEWS 23 | APR 03 | New IPC 8 fields and IPC thesaurus added to PATDPAFULL |
| NEWS 24 | APR 03 | Bibliographic data updates resume; new IPC 8 fields and IPC thesaurus added in PCTFULL |
| NEWS 25 | APR 04 | STN AnaVist $500 visualization usage credit offered |

NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
http://download.cas.org/express/v8.0-Discover/

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* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 17:22:43 ON 06 APR 2006

=> file reg
COST IN U.S. DOLLARS

| | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 0.21 | 0.21 |

FILE 'REGISTRY' ENTERED AT 17:22:52 ON 06 APR 2006


Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 5 APR 2006 HIGHEST RN 879397-30-5
DICTIONARY FILE UPDATES: 5 APR 2006 HIGHEST RN 879397-30-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

**********
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
**********

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

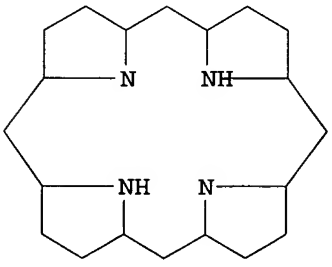
REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10713889-1.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR




Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss sam
SAMPLE SEARCH INITIATED 17:23:27 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 6497 TO ITERATE

30.8% PROCESSED 2000 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

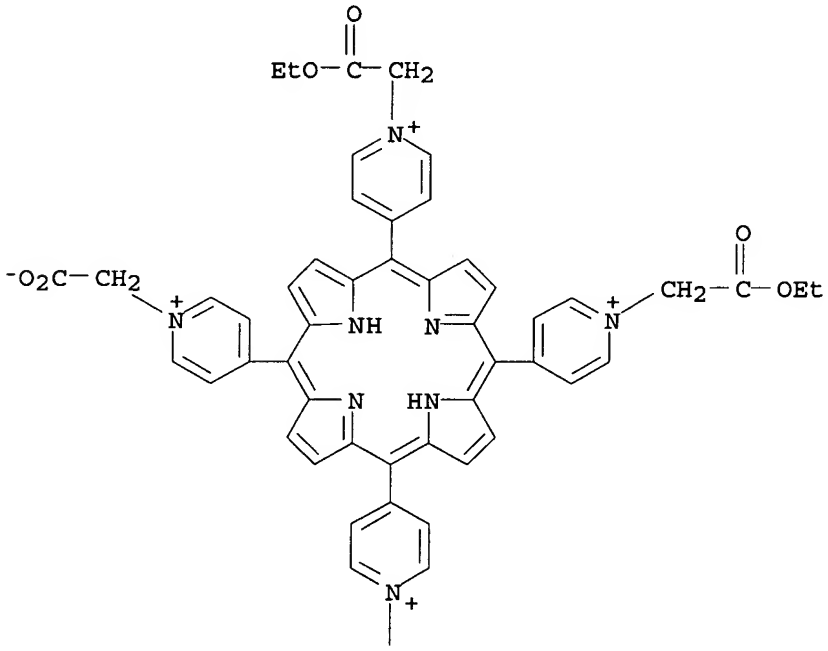
FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 125108 TO 134772
PROJECTED ANSWERS: 23265 TO 27541

L2 50 SEA SSS SAM L1

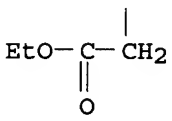
=> d scan

L2 50 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN Pyridinium, 4,4',4''-[20-[1-(carboxymethyl)pyridinium-4-yl]-21H,23H-porphine-5,10,15-triyl]tris[1-(2-ethoxy-2-oxoethyl)-, mono(inner salt) (9CI)
MF C54 H49 N8 O8
CI COM

PAGE 1-A

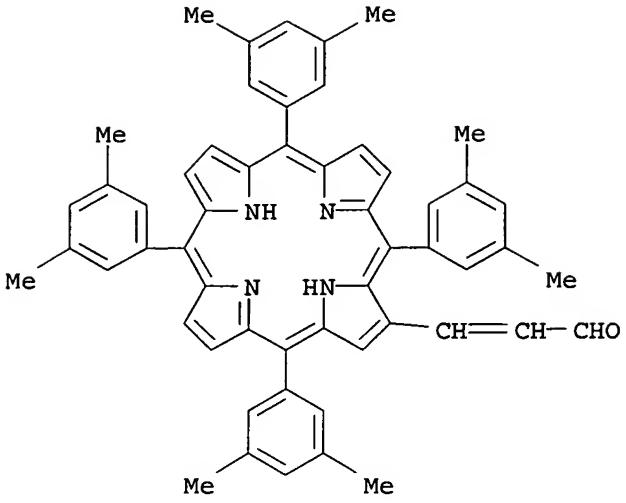


PAGE 2-A



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 50 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
IN 2-Propenal, 3-[5,10,15,20-tetrakis(3,5-dimethylphenyl)-21H,23H-porphin-2-yl]- (9CI)
MF C55 H48 N4 O




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> s l1 sss full
FULL SEARCH INITIATED 17:23:45 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 131900 TO ITERATE

100.0% PROCESSED 131900 ITERATIONS 26394 ANSWERS
SEARCH TIME: 00.00.01

L3 26394 SEA SSS FUL L1

=> s l3 and Sn/els
189337 SN/ELS
L4 57 L3 AND SN/ELS

=> file caplus
COST IN U.S. DOLLARS

| | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 172.58 | 172.79 |

FILE 'CAPLUS' ENTERED AT 17:24:22 ON 06 APR 2006
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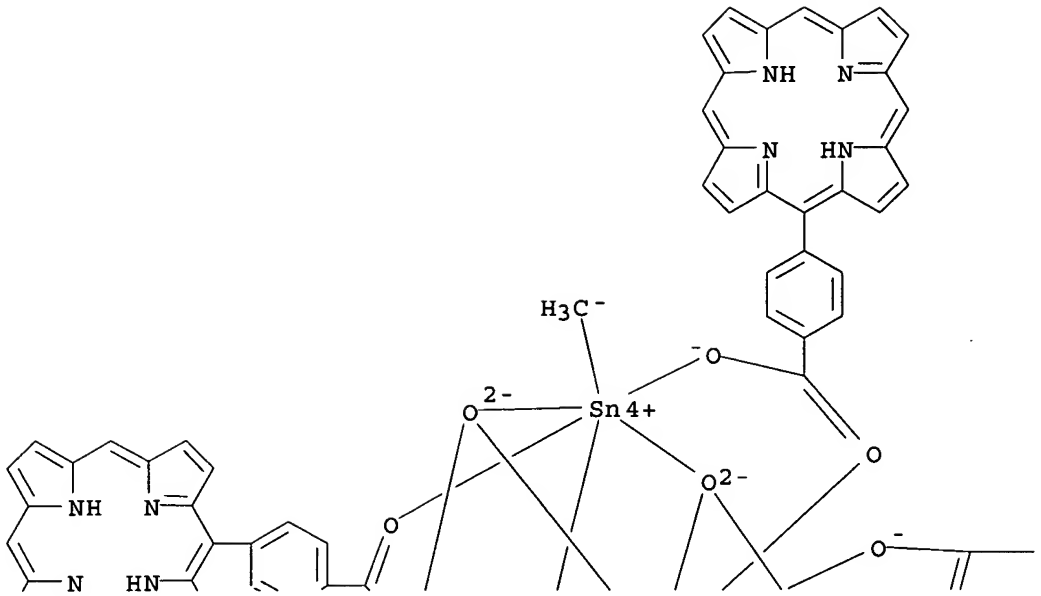
FILE COVERS 1907 - 6 Apr 2006 VOL 144 ISS 15
FILE LAST UPDATED: 5 Apr 2006 (20060405/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

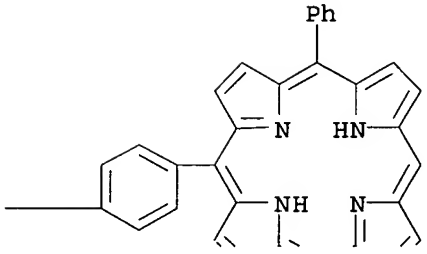
http://www.cas.org/infopolicy.html

```
=> s l4 and mesoporphyrin
            19 L4
          1300 MESOPORPHYRIN
            63 MESOPORPHYRINS
          1321 MESOPORPHYRIN
                 (MESOPORPHYRIN OR MESOPORPHYRINS)
L5           0 L4 AND MESOPORPHYRIN

=> s l3 and mesoporphyrin
         23241 L3
          1300 MESOPORPHYRIN
            63 MESOPORPHYRINS
          1321 MESOPORPHYRIN
                 (MESOPORPHYRIN OR MESOPORPHYRINS)
L6          769 L3 AND MESOPORPHYRIN

=> s l4
L7           19 L4

=> s l4 and complex
            19 L4
       1252648 COMPLEX
        710984 COMPLEXES
       1541322 COMPLEX
                 (COMPLEX OR COMPLEXES)
L8           17 L4 AND COMPLEX

=> dis l8 1-17 bib abs hitstr

L8   ANSWER 1 OF 17  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2005:106582  CAPLUS
DN   142:366152
TI   A Lipophilic Hexaporphyrin Assembly Supported on a Stannoxane Core
AU   Chandrasekhar, Vadapalli; Nagendran, Selvarajan; Azhakar, Ramachandran;
     Kumar, Murugaeson Ravi; Srinivasan, Alagar; Ray, Kallol; Chandrashekar,
     Tavarekere K.; Madhavaiah, C.; Verma, Sandeep; Priyakumar, U. Deva;
     Sastry, G. Narahari
CS   Department of Chemistry, Indian Institute of Technology-Kanpur, Kanpur,
     208016, India
SO   Journal of the American Chemical Society (2005), 127(8), 2410-2411
     CODEN: JACSAT; ISSN: 0002-7863
PB   American Chemical Society
DT   Journal
LA   English
OS   CASREACT 142:366152
AB   Lipophilic hexaporphyrin free-base [BuSn(O)O2C(H2TTP)]6 [O2C(H2TTP) =
     5-(4-carboxyphenyl)-10,15,20-tritolyl-21,23H-porphyrin] and its
     Cu-metalated derivative supported on a stannoxane (Sn6O6) core were
     synthesized and characterized.  The nuclease activity of the Cu derivative was
     studied by incubating supercoiled DNA.  Nearly complete conversion of form
     I to form II was observed in 5 min.  DNA cleavage did not occur in the
     presence of the free base hexaporphyrin alone.  The Cu complex
     was inactive toward protein cleavage.  Thus, the Cu complex can
     potentially be used for selective removal of nucleic acid contaminants
     from cell exts.  The palladium(II) hexaporphyrin-stannoxane derivative was
     also prepared
IT   848738-14-7
     RL: PRP (Properties)
        (optimized geometry from PM3 calcns.)
RN   848738-14-7  CAPLUS
CN   Tin, hexamethylhexa-μ3-oxo[μ-[4-(10-phenyl-21H,23H-porphin-5-
     yl)benzoato-κO:κO']]pentakis[μ-[4-(21H,23H-porphin-5-
     yl)benzoato-κO:κO']]hexa- (9CI)  (CA INDEX NAME)
```

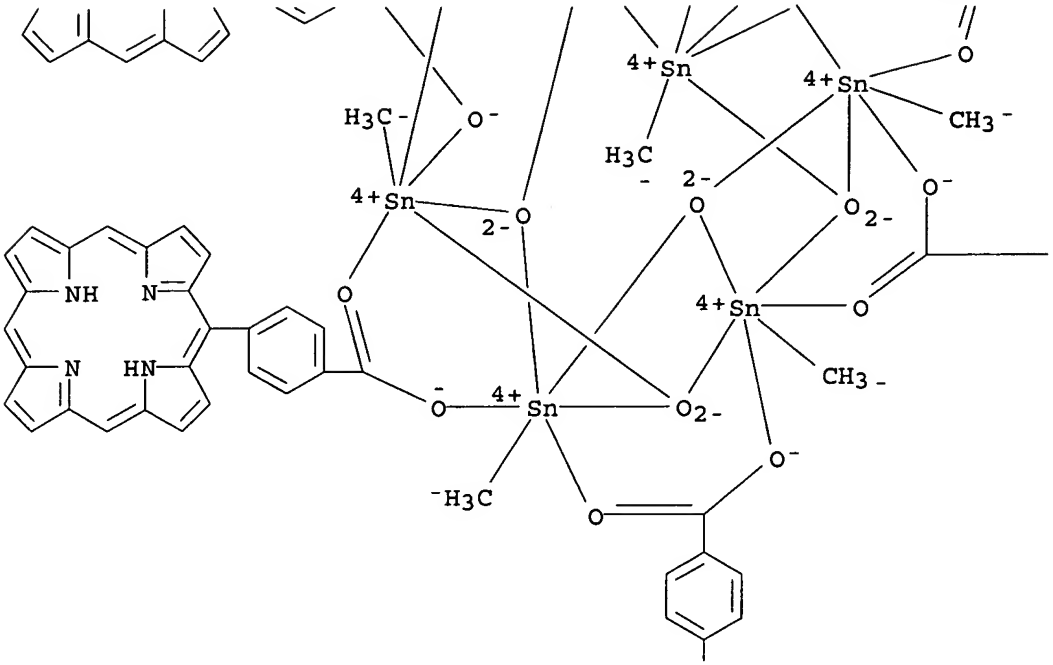
PAGE 1-A



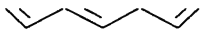

PAGE 1-B

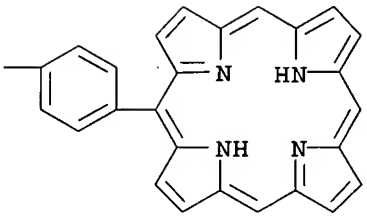


PAGE 2-A

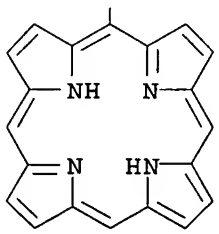


PAGE 2-B





PAGE 3-A

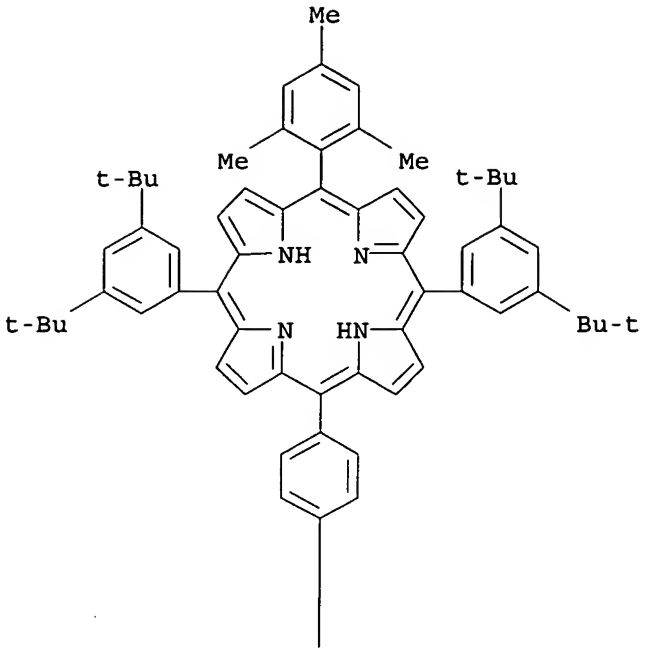


RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:45741 CAPLUS
DN 140:217731
TI A Tin-Complexation Strategy for Use with Diverse Acylation Methods in the Preparation of 1,9-Diacyldipyrromethanes
AU Tamaru, Shun-ichi; Yu, Lianhe; Youngblood, W. Justin; Muthukumaran, Kannan; Taniguchi, Masahiko; Lindsey, Jonathan S.

CS Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SO Journal of Organic Chemistry (2004), 69(3), 765-777
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 140:217731
AB The acylation of dipyrromethanes to form 1,9-diacyldipyrromethanes is an essential step in the rational synthesis of porphyrins. Although several methods for acylation are available, purification is difficult because 1,9-diacyldipyrromethanes typically streak extensively upon chromatog. and give amorphous powders upon attempted crystallization A solution to this problem has been achieved by reacting the 1,9-diacyldipyrromethane with Bu2SnCl2 to give the corresponding dibutyl(5,10-dihydrodipyrrinato)tin(IV) **complex**. The reaction is selective for dipyrromethanes that bear acyl groups at both the 1- and 9-positions but otherwise is quite tolerant of diverse substituents. The diacyldipyrromethane-tin **complexes** are stable to air and water, are highly soluble in common organic solvents, crystallize readily, and chromatograph without streaking. Four methods (Friedel-Crafts, Grignard, Vilsmeier, benzoxathiolium salt) were examined for the direct 1,9-diacylation of a dipyrromethane or the 9-acylation of a 1-acyldipyrromethane. In each case, treatment of the crude reaction mixture with Bu2SnCl2 and TEA at room temperature enabled facile isolation of multigram quantities of the 1,9-diacyldipyrromethane-tin **complex**. The diacyldipyrromethane-tin **complexes** could be decomplexed with TFA in nearly quant. yield. Alternatively, use of a diacyldipyrromethane-tin **complex** in a porphyrin-forming reaction (reduction with NaBH4, acid-catalyzed condensation with a dipyrromethane, DDQ oxidation) afforded the desired free base porphyrin in yield comparable to that obtained from the uncomplexed diacyldipyrromethane. The acylation/tin-complexation strategy has been applied to a bis(dipyrromethane) and a porphyrin-dipyrromethane. In summary, the tin-complexation strategy has broad scope, is compatible with diverse acylation methods, and greatly facilitates access to 1,9-diacyldipyrromethanes.
IT **666705-26-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of (methylene)bis[pyrrole]tin **complexes** and use of tin-complexation strategy for acylation of dipyrromethane derivs.)
RN 666705-26-6 CAPLUS
CN Tin, [[[[[4-[10,20-bis[3,5-bis(1,1-dimethylethyl)phenyl]-15-(2,4,6-trimethylphenyl)-21H,23H-porphin-5-yl]phenyl]methylene]di(1H-pyrrole-5,2-diyl-κN)]bis[(4-methylphenyl)methanonato-κO]](2-)]-, (OC-6-22)- (9CI) (CA INDEX NAME)

PAGE 1-A

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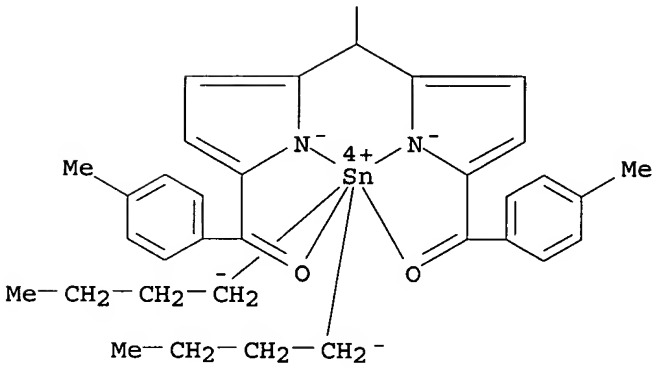



RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:924541 CAPLUS
DN 140:121530
TI Synthesis and characterization of carboxylate **complexes** of SnIV porphyrin monomers and oligomers
AU Hawley, Joanne C.; Bampos, Nick; Sanders, Jeremy K. M.
CS University Chemical Laboratory, University of Cambridge, Cambridge, CB2 1EW, UK
SO Chemistry--A European Journal (2003), 9(21), 5211-5222
CODEN: CEUJED; ISSN: 0947-6539
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English
OS CASREACT 140:121530
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

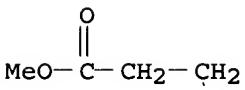
AB Most of the porphyrin-recognition chemical the authors have studied previously has centered on kinetically labile metal - ligand interactions, such as Zn-N and Ru-N. The authors' interest in the broader scope of mol. recognition required a metal with the ability to specifically recognize non-nitrogen-based ligands, with a significantly different binding interaction to distinguish it from N-based analogs. The authors describe interactions of SnIV porphyrins, for example I (M = M' = Sn(OH)2 or M = Sn(OH)2, M' = Zn and R = CH2CH2CO2Me) and Sn(TPP)(OH)2 (H2TPP = tetraphenylporphyrin) that bind O-based ligands and for which the SnIV-O bond is in slow exchange on the NMR timescale. Carboxylate **complexes** is employed to highlight the structural/geometric features of porphyrin monomers and cyclic oligomers. Where more than one porphyrin unit is present in a mol. scaffold, the authors report the effect of carboxylate binding on the **complex** when the two porphyrins contain different metals (typically SnIV and ZnII). The unexpected spectroscopic and structural properties of the Sn2(9-anthroic acid)-porphyrin dimer are also reported.

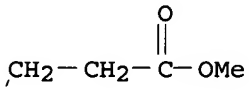
IT **645387-60-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 645387-60-6 CAPLUS

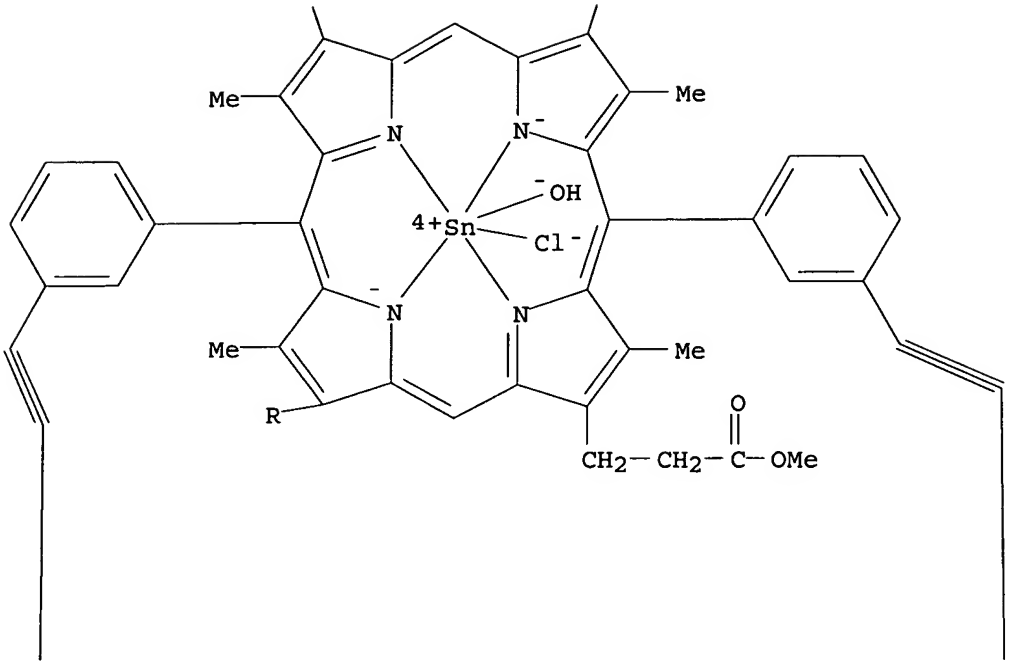
CN Tin, chlorohydroxy[octamethyl 18,24,43,49,52,58,67,73-octamethyl-60,61,62,63,75,76,79,80-octaazapentadecacyclo[39.9.9.916,26.12,6.111,15.117,20.122,25.127,31.136,40.142,45.147,50.151,54.156,59.166,69.171,74]octaconta-2,4,6(78),11,13,15(77),16,18,20,22(75),23,25,27,29,31(65),36,38,40(64),41,43,45,47(62),48,50,51,53,55,57,59,66,68,70,72,74(79)-tetratriacontaene-7,9,32,34-tetrayne-19,23,44,48,53,57,68,72-octapropanoato(2-)-κN60,κN61,κN62,κN63]-, (OC-6-23)- (9CI) (CA INDEX NAME)



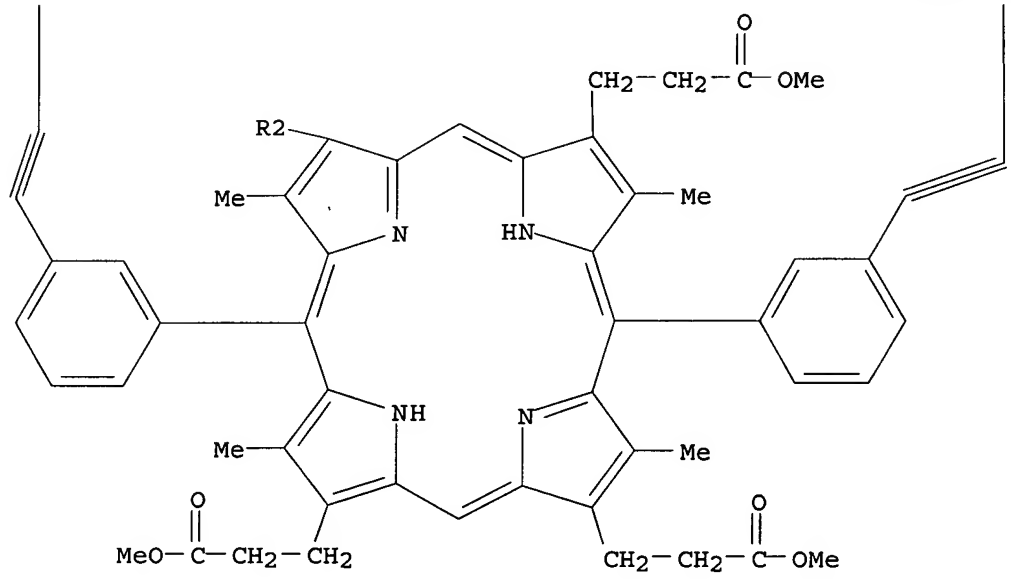




PAGE 2-A




PAGE 3-A

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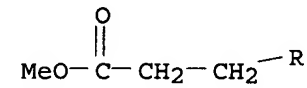
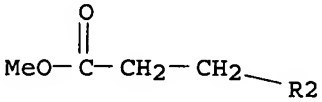
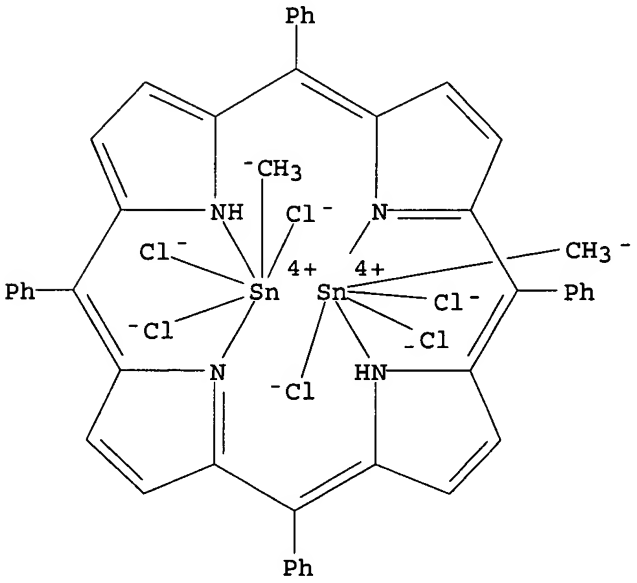


RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:139931 CAPLUS
DN 139:53094
TI Synthesis, characterization and spectral studies of some molecular adducts of organotin(IV) chlorides with free base meso-tetraarylporphyrins
AU Asadi, Mozaffar; Zabardasti, Abedien
CS Chemistry Department, College of Sciences, Shiraz University, Shiraz, Iran
SO Journal of Chemical Research, Synopses (2002), (12), 611-613
CODEN: JRPSDC; ISSN: 0308-2342
PB Science Reviews
DT Journal
LA English
OS CASREACT 139:53094
AB Some mol. **complexes** of diethyltin(IV) dichloride and methyltin(IV) trichloride with para-substituted meso-tetraphenylporphyrins (PP) of the general formula [{Et2SnCl2}H2T(4-X)PP] and [(MeSnCl3)2H2T(4-X)PP]; {X = OCH3, CH3, H, and Cl} were synthesized and characterized by 1H NMR, UV-visible, and elemental microanal. methods.
IT **544711-28-6P 544711-29-7P 544711-30-0P**
**544711-31-1P 544711-32-2P 544711-33-3P**
**544711-34-4P 544711-35-5P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis, characterization and spectral studies of some mol. adducts of organotin(IV) chlorides with free base meso-tetraarylporphyrins)
RN 544711-28-6 CAPLUS
CN Tin, hexachlorodimethyl[μ-[5,10,15,20-tetrakis(4-chlorophenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 544711-29-7 CAPLUS
CN Tin, hexachlorodimethyl[μ-(5,10,15,20-tetraphenyl-21H,23H-porphine-κN21,κN22:κN23,κN24)]di- (9CI) (CA INDEX NAME)




RN 544711-30-0 CAPLUS
CN Tin, hexachlorodimethyl[μ-[5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 544711-31-1 CAPLUS
CN Tin, hexachlorodimethyl[μ-[5,10,15,20-tetrakis(4-methoxyphenyl)-21H,23H-

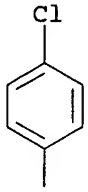
porphine-κN21,κN22:κN23,κN24]]di- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

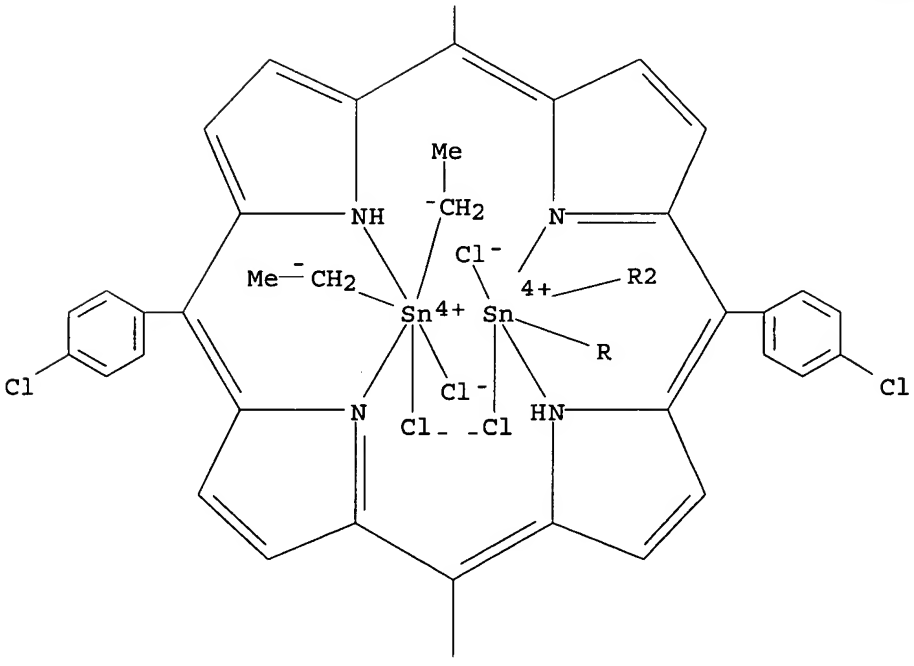
RN 544711-32-2 CAPLUS

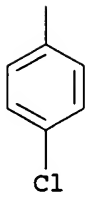
CN Tin, tetrachlorotetraethyl[μ-[rel-(21R,23S)-5,10,15,20-tetrakis(4-chlorophenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di-, stereoisomer (9CI) (CA INDEX NAME)

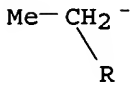
PAGE 1-A

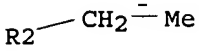



PAGE 2-A





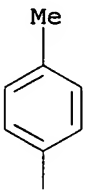



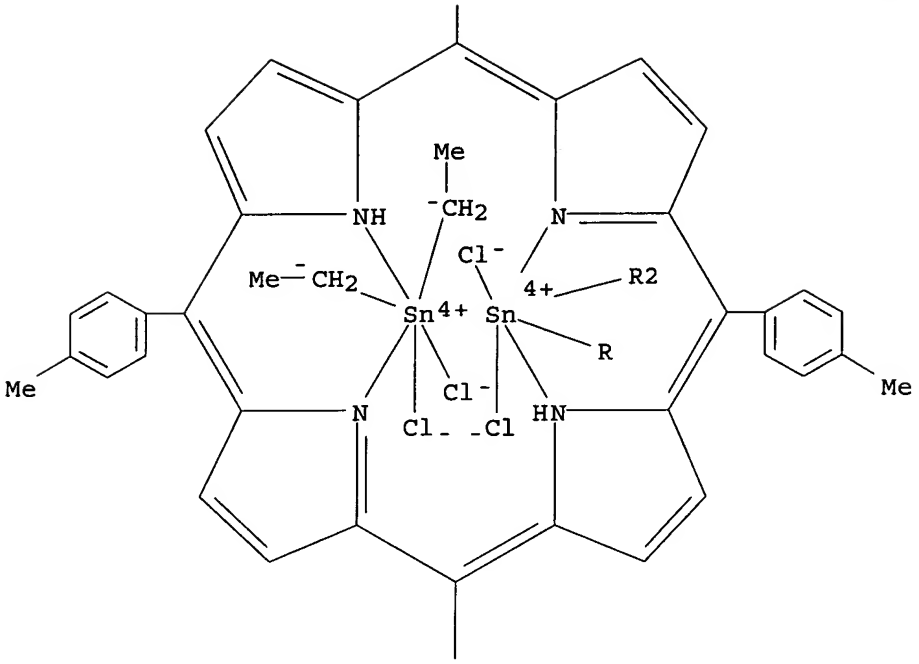

RN 544711-33-3 CAPLUS
CN Tin, tetrachlorotetraethyl[μ-[rel-(21R,23S)-5,10,15,20-tetraphenyl-21H,23H-porphine-κN21,κN22:κN23,κN24]]di-, stereoisomer (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 544711-34-4 CAPLUS
CN Tin, tetrachlorotetraethyl[μ-[rel-(21R,23S)-5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di-, stereoisomer (9CI) (CA INDEX NAME)

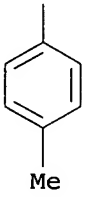


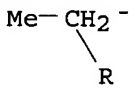


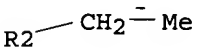
PAGE 2-A



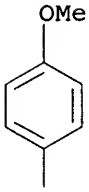

PAGE 3-A



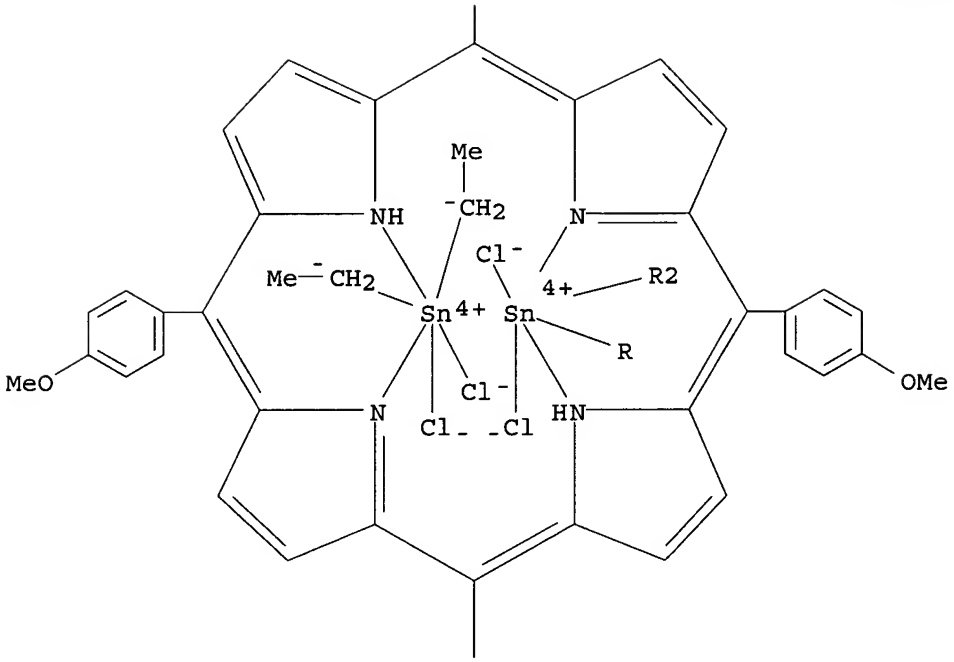



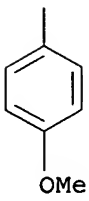



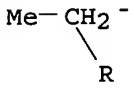

RN 544711-35-5 CAPLUS
CN Tin, tetrachlorotetraethyl[μ-[rel-(21R,23S)-5,10,15,20-tetrakis(4-methoxyphenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di-, stereoisomer (9CI) (CA INDEX NAME)

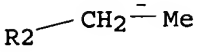

OMe




Me
-CH2
NH
N
Cl-
Me—CH2
4+
R2
Sn4+
Sn
R
MeO
OMe
Cl-
N
HN
Cl- -Cl



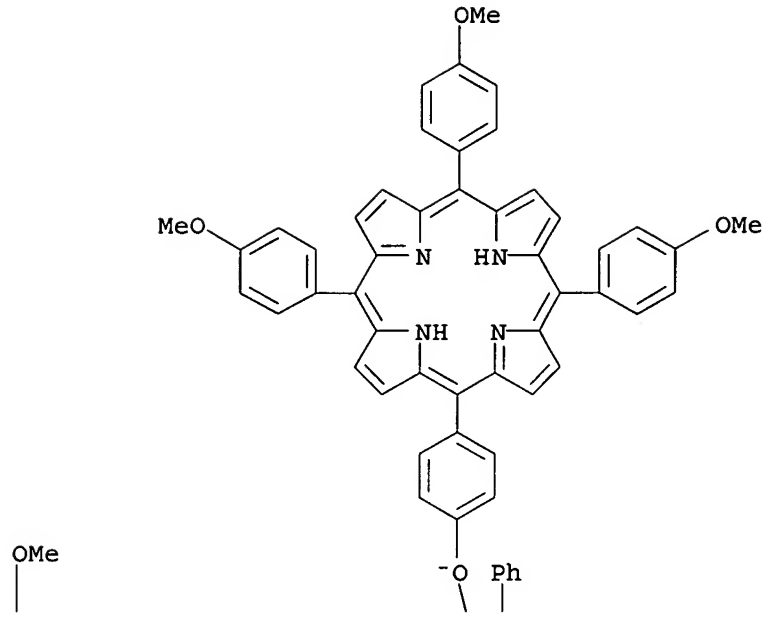



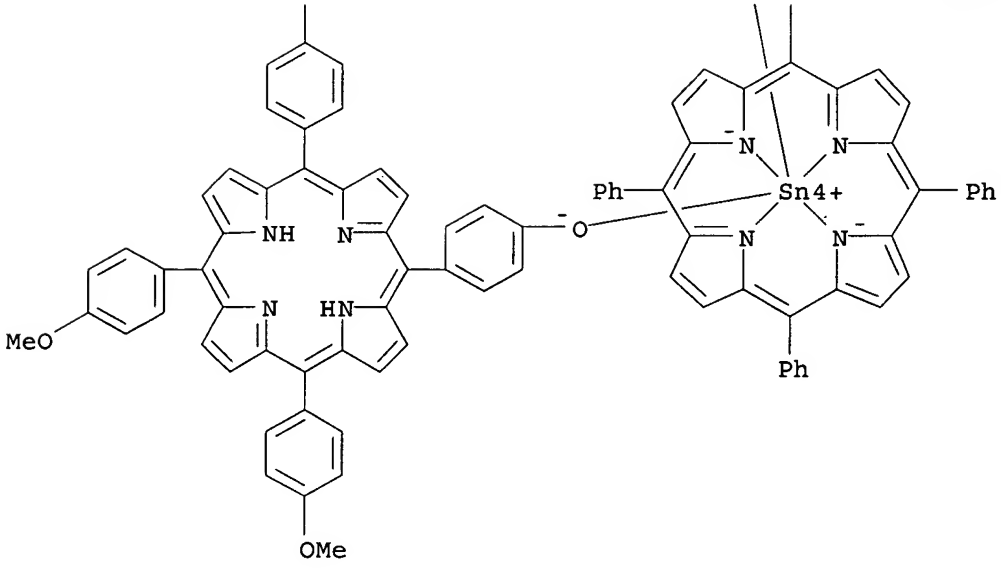

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:629792 CAPLUS
DN 138:18790
TI Self-assembling mixed porphyrin trimers - the use of diaxial Sn(IV) porphyrin phenolates as an organising precept
AU Fallon, Gary D.; Langford, Steven J.; Lee, Marcia A.-P.; Lygris, Emmanuel
CS School of Chemistry, Monash University, Victoria, 3800, Australia
SO Inorganic Chemistry Communications (2002), 5(9), 715-718
CODEN: ICCOFP; ISSN: 1387-7003
PB Elsevier Science B.V.
DT Journal
LA English
OS CASREACT 138:18790
AB Sn(IV) porphyrin phenolates are the stable product of the equilibrium-based condensation reaction of phenols with Sn(IV) porphyrin dihydroxide in an organic medium. Their formation is characterized by significant shifts (1-5 ppm) of the phenolic protons within the recorded 1H NMR spectra. To demonstrate the inherent simplicity of their formation and the flexibility in choice of phenolic ligand towards the design and fabrication of more elaborate assemblies and arrays the authors have constructed two different mixed porphyrin trimer families in which the porphyrin units differ in their orientation to the central porphyrin unit using Sn-O, Ru(III)-N and Zn(II)-N interactions. In one of these cases, 5 mol components are self-assembled in 1-pot to form a cofacially stacked mixed porphyrin trimer with high yield.
IT **477530-30-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 477530-30-6 CAPLUS
CN Tin, [5,10,15,20-tetraphenyl-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methoxyphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A




PAGE 2-A




RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

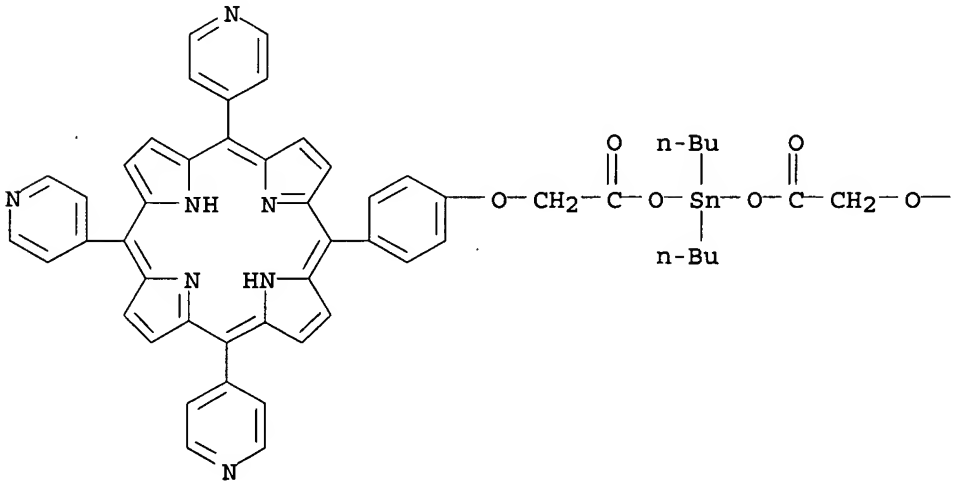
L8 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:529524 CAPLUS
DN 138:180192
TI Synthesis and characterization of water-insoluble and water-soluble dibutyltin(IV) porphinate **complexes** based on the tris(pyridinyl)porphyrin moiety, their anti-tumor activity in vitro and interaction with DNA
AU Han, Gaoyi; Yang, Pin
CS Shanxi University, Institute of Molecular Science, Taiyuan, 030006, Peop. Rep. China
SO Journal of Inorganic Biochemistry (2002), 91(1), 230-236
CODEN: JIBIDJ; ISSN: 0162-0134
PB Elsevier Science Inc.

DT Journal
LA English
OS CASREACT 138:180192
AB The water-insol. and water-soluble organotin(IV)porphinate **complexes** based on the tris-(4-pyridinyl)porphyrin and tris(N-methyl-4-pyridiniumyl)porphyrin moieties were synthesized and characterized by elemental anal., 1H NMR, IR and electrospray ionization mass spectra. The in vitro activity of the compds. against P388 leukemia and A-549 was determined The results show that the anti-tumor activities of organotin(IV)porphinate is related to the water solubility of the compds. and the central ion in the porphyrin ring. The interaction between the water-soluble dibutyltin(IV) porphinate **complexes** and DNA has been investigated. The result shows that compds. cause DNA hypochromism measured by A260, a slight increase in the viscosity of the DNA, and an increase in the m.p. of DNA by 2.9 and 1.6°, resp. at DNAbase/DrugPor ratios of 60. The binding consts. to DNA were 1.35±0.16+107 M-1 and 1.45±0.12+106 M-1 determined using EB competition method based on the porphyrin concentration, which is 20 and five times greater than that of precursor porphyrins [5-p,o-(carboxy)methoxyphenyl-10,15,20-tris(N-methyl-4-pyridiniumyl)] porphyrin (p,o-tMPyPac) to DNA. Electrophoresis test shows that the compds. cannot cleave the DNA. According to the electrophoresis test result and all the above results, the cytotoxic activity against P388 and A-549 tumor cells appears not to come from the cleavage of DNA caused by the compds. but from the high affinity of compds. to DNA.

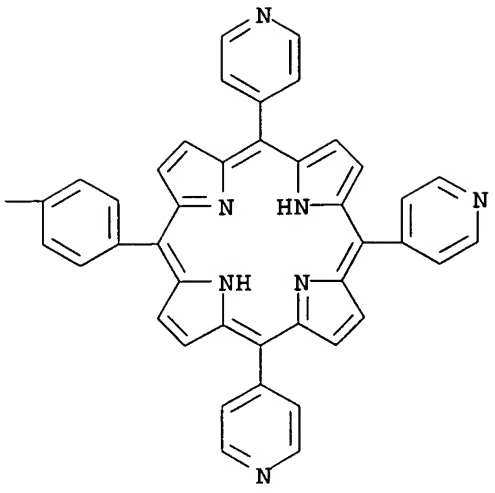
IT **498547-35-6P 498547-36-7P 498547-37-8P 498547-38-9P**
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(synthesis and characterization of water-insol. and water-soluble dibutyltin(IV) porphinate **complexes** based on tris(pyridinyl)porphyrin moiety, their antitumor activity in vitro and interaction with DNA)

RN 498547-35-6 CAPLUS
CN 21H,23H-Porphine, 5,5'-[(dibutylstannylene)bis[oxy(2-oxo-2,1-ethanediyl)oxy-4,1-phenylene]]bis[10,15,20-tri-4-pyridinyl- (9CI) (CA INDEX NAME)

PAGE 1-A

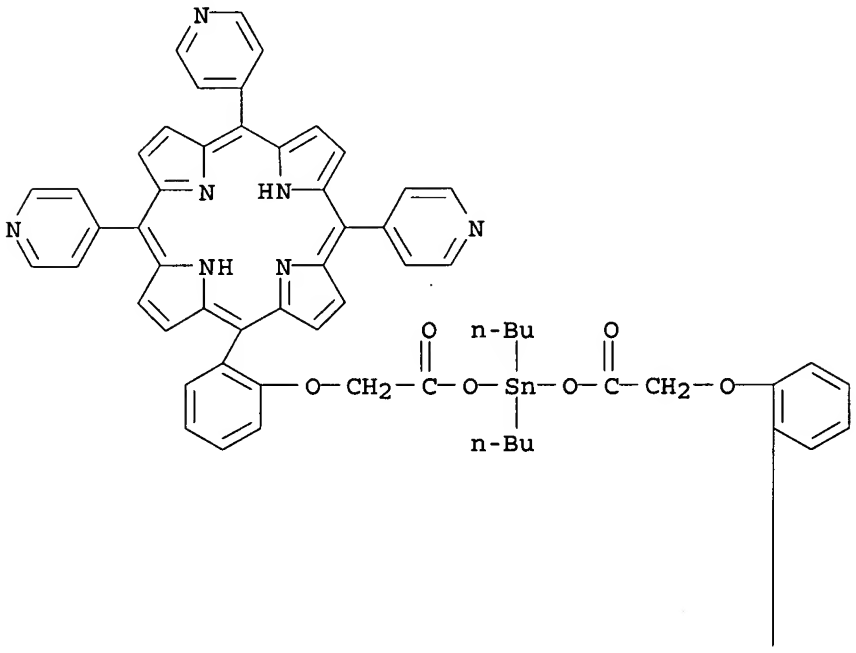


PAGE 1-B



RN 498547-36-7 CAPLUS
CN 21H,23H-Porphine, 5,5'-[(dibutylstannylene)bis[oxy(2-oxo-2,1-ethanediyl)oxy-2,1-phenylene]]bis[10,15,20-tri-4-pyridinyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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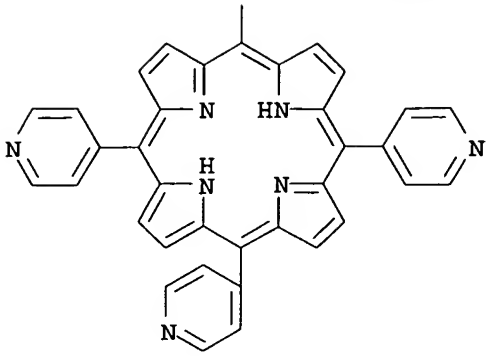
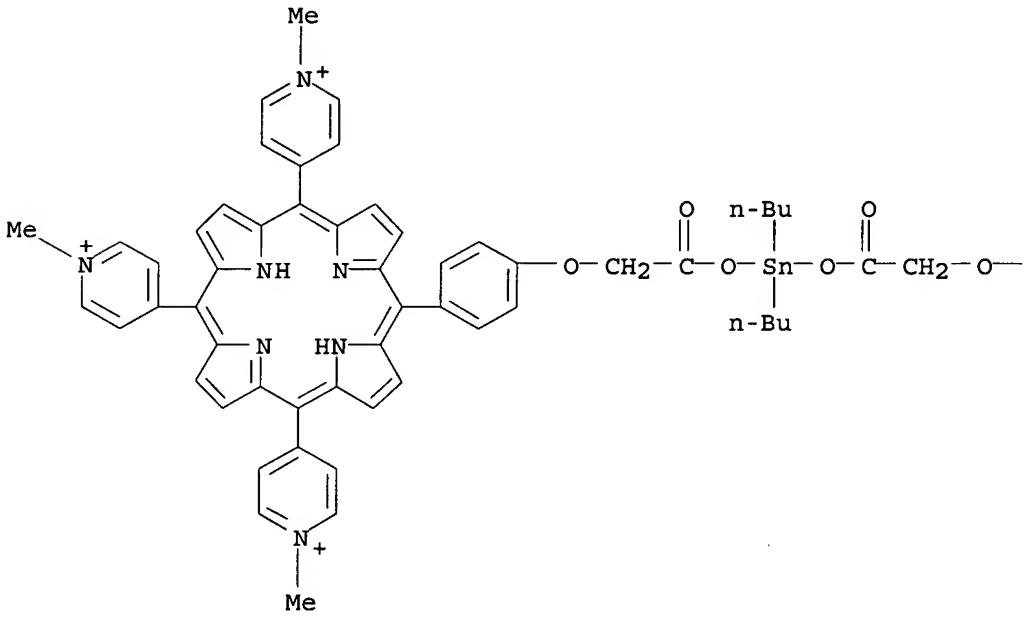


RN 498547-37-8 CAPLUS
CN Pyridinium, 4,4',4'',4''',4'''',4'''''-[(dibutylstannylene)bis[oxy(2-oxo-2,1-ethanediyl)oxy-4,1-phenylene-21H,23H-porphine-20,5,10,15-tetrayl]]hexakis[1-methyl-, hexaiodide (9CI) (CA INDEX NAME)

PAGE 1-A



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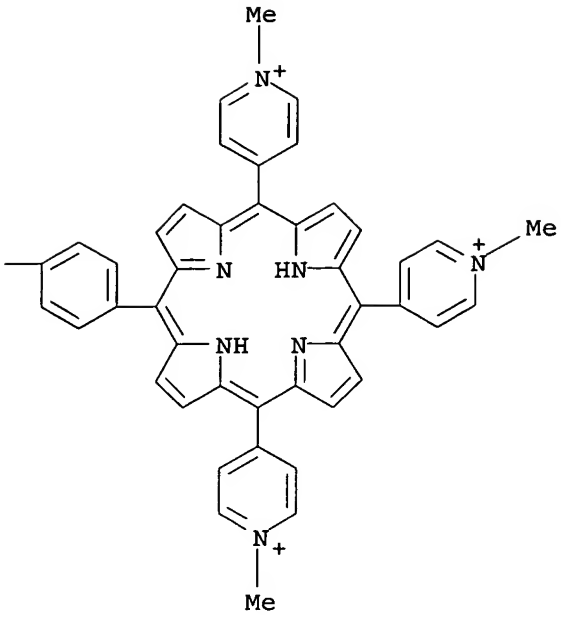
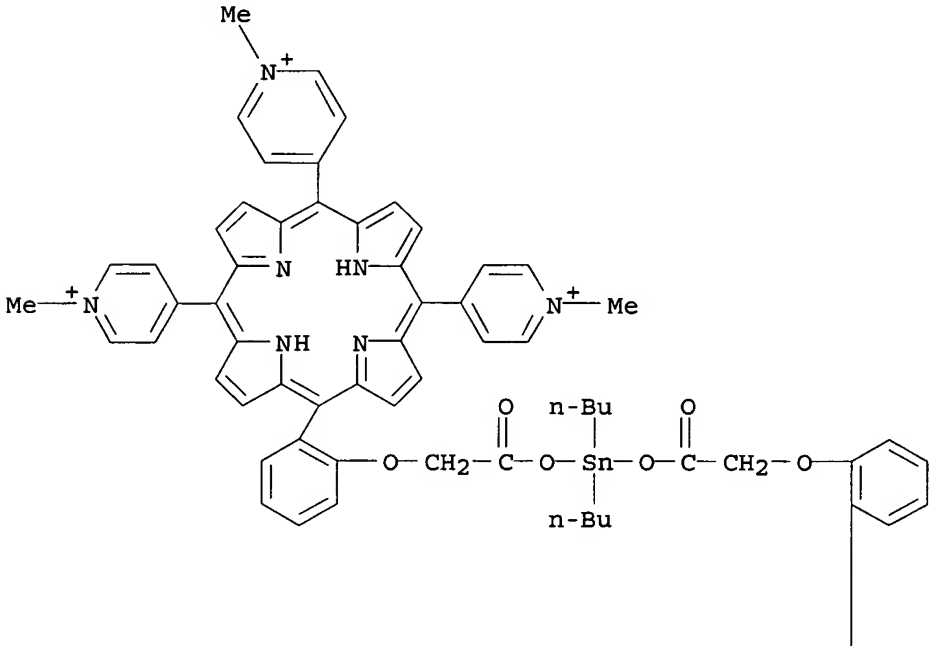


● 6 $I^-$

RN 498547-38-9 CAPLUS

CN Pyridinium, 4,4',4'',4''',4'''',4''''''-[(dibutylstannylene)bis[oxy(2-oxo-2,1-ethanediyl)oxy-2,1-phenylene-21H,23H-porphine-20,5,10,15-tetrayl]]hexakis[1-methyl-, hexaiodide (9CI) (CA INDEX NAME)

PAGE 1-A



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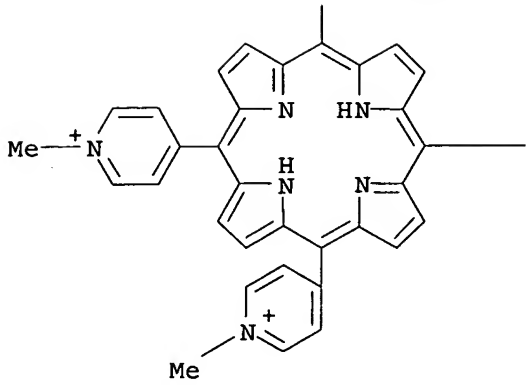
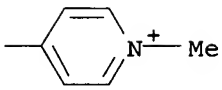


●6 $I^-$

PAGE 2-B



RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:823629 CAPLUS
DN 136:128085
TI New Molecular Arrays Based on a Tin(IV) Porphyrin Scaffold
AU Kumar, A. Ashok; Giribabu, L.; Reddy, D. Raghunath; Maiya, Bhaskar G.
CS School of Chemistry, University of Hyderabad, Hyderabad, 500046, India
SO Inorganic Chemistry (2001), 40(26), 6757-6766
CODEN: INOCAJ; ISSN: 0020-1669
PB American Chemical Society
DT Journal
LA English
OS CASREACT 136:128085
AB Two new porphyrin arrays, a hexamer and a nonamer, were synthesized and characterized by elemental anal. as well as mass, 1H NMR, and UV-visible spectroscopic methods. The scheme of construction of these arrays employs a synthetic protocol involving sequential organic and inorg. reactions conducted, resp., at the peripheral meso-Ph ring and the central tin(IV) ion of the porphyrin scaffold. The architecture of the hexamer is such that it is based on a covalently linked tin(IV) porphyrin dimer, with each of the two tin(IV) centers trans-axially ligated to two free-base porphyrins, while the higher homolog features a tin(IV) porphyrin trimer as the basal unit, with its central metalloid ions having two free-base porphyrins as axial ligands. This extended, axial-bonding-type architecture of the new arrays was studied by the 1H NMR method, which reveals characteristic ring-current-induced shifts and coupling patterns for the resonances due to protons of the axial free-base porphyrin subunits. The presence of any ring-ring (basal-basal, basal-axial, or axial-axial) interaction in these arrays is not obvious from their UV-visible and redox potential data, which are close to those of the corresponding constituent monomeric species. However, their singlet-state activities are quite different from those of the precursor reference compds. as probed by steady-state fluorescence. The results of the detailed studies carried out on these hybrid, bichromophoric arrays were interpreted in

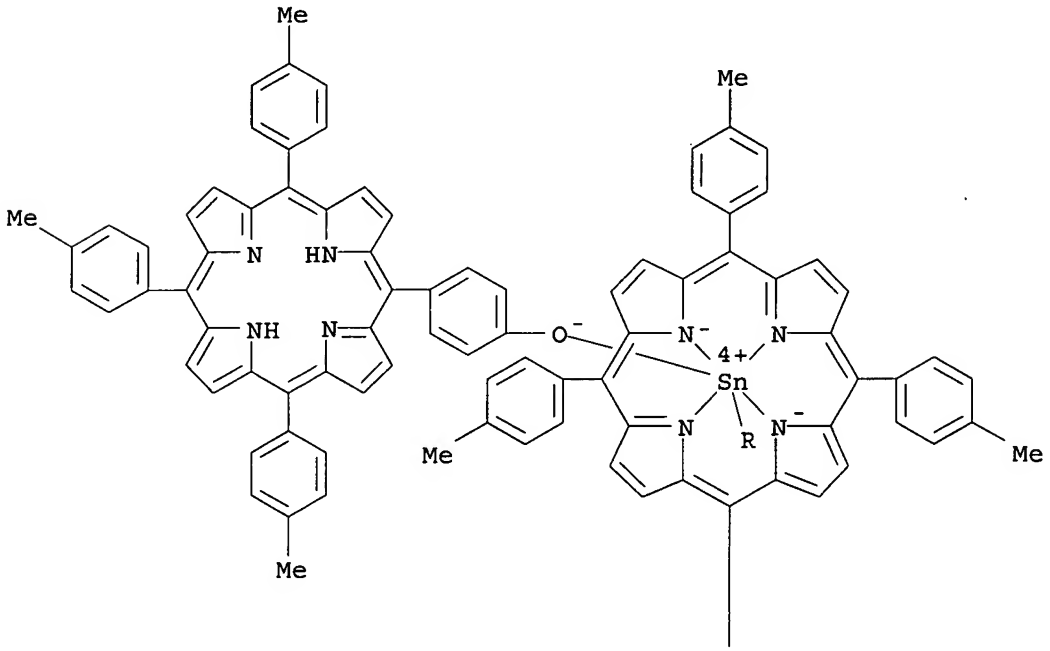
terms of the occurrence of intra-array, inter-chromophore energy- and electron-transfer reactions.

IT **250219-89-7**
RL: PRP (Properties)
(fluorescence)

RN 250219-89-7 CAPLUS

CN Tin, [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A

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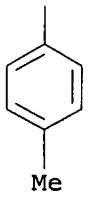
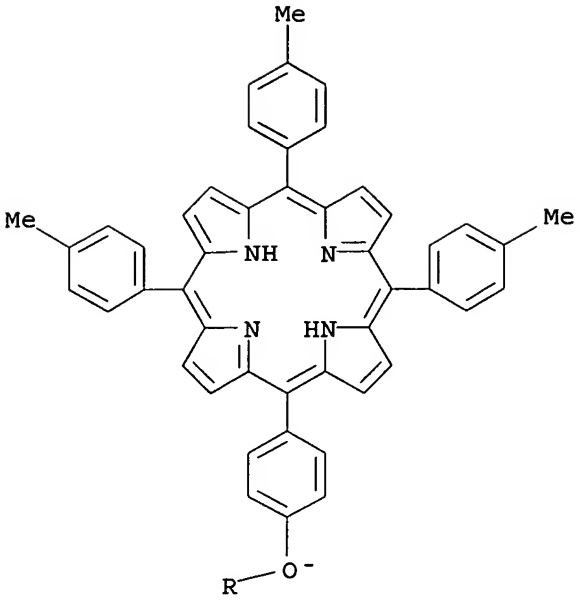
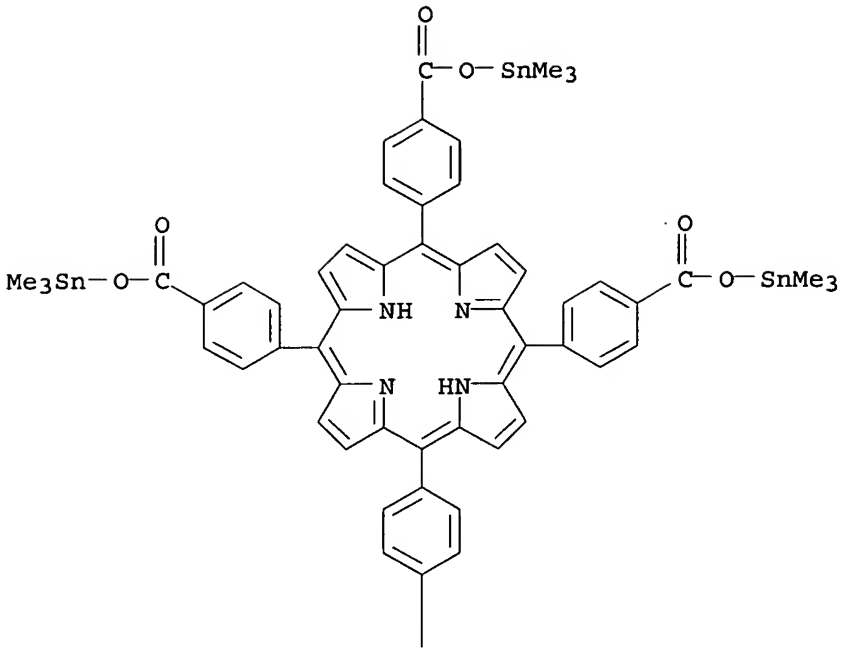





RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:473256 CAPLUS
DN 135:257299
TI Computational study of dimethyl- and trimethyl-tin(IV) **complexes** of porphyrin derivatives
AU Duca, Dario; Barone, Giampaolo; La Manna, Gianfranco; Fiore, Tiziana; Pellerito, Claudia; Di Stefano, Roberta; Scopelliti, Michelangelo; Pellerito, Lorenzo
CS Dipartimento di Scienze Farmaceutiche, Universita degli Studi di Salerno, Fisciano, 84084, Italy
SO Applied Organometallic Chemistry (2001), 15(7), 581-592
CODEN: AOCHEX; ISSN: 0268-2605
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB The mol. geometry, energetics and electronic charge distribution of diorgano- and triorgano-tin(IV) **complexes** of [protoporphyrin-IX] and [meso-tetra(4-carboxyphenyl)porphine] derivs. were determined at semi-empirical and ab initio levels. To study the mol. details of the **complexes**, simpler mol. models were calculated by the ab initio pseudo-potential method. The mol. properties of these **complexes** are essentially independent of the presence of the peripheral tin atoms. Agreement was always found among the results of the different computational approaches, as well as between the theor. and the exptl. findings on the mol. geometry of the hypothesized **complexes**. Interaction modes between water and the organo-tin systems considered were affected strongly by the presence of peripheral tin atoms.
IT **193556-04-6 359796-84-2 359796-86-4 359796-87-5**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(computational study of dimethyl- and trimethyl-tin **complexes** of porphyrin derivs.)
RN 193556-04-6 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(trimethylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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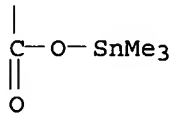
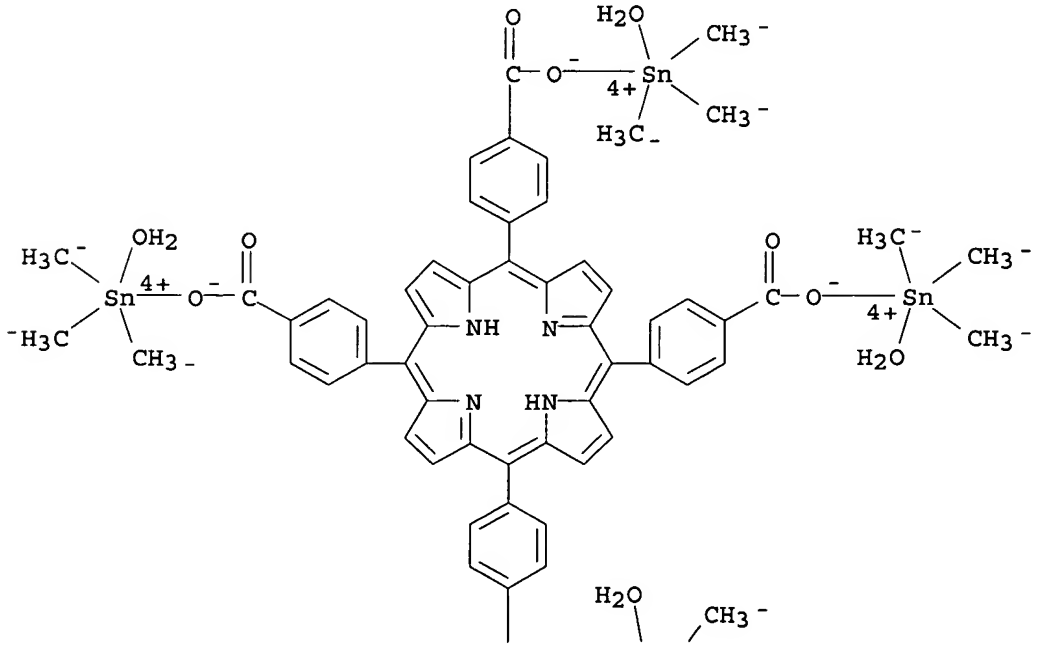


RN 359796-84-2 CAPLUS
CN Tin, tetraaquadodecamethyl[μ4-[[4,4',4'',4'''-(21H,23H-porphine-5,10,15,20-tetrayl)tetrakis[benzoato-κO]](4-)]]tetra-, stereoisomer (9CI) (CA INDEX NAME)

PAGE 1-A



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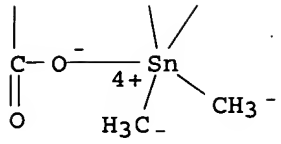
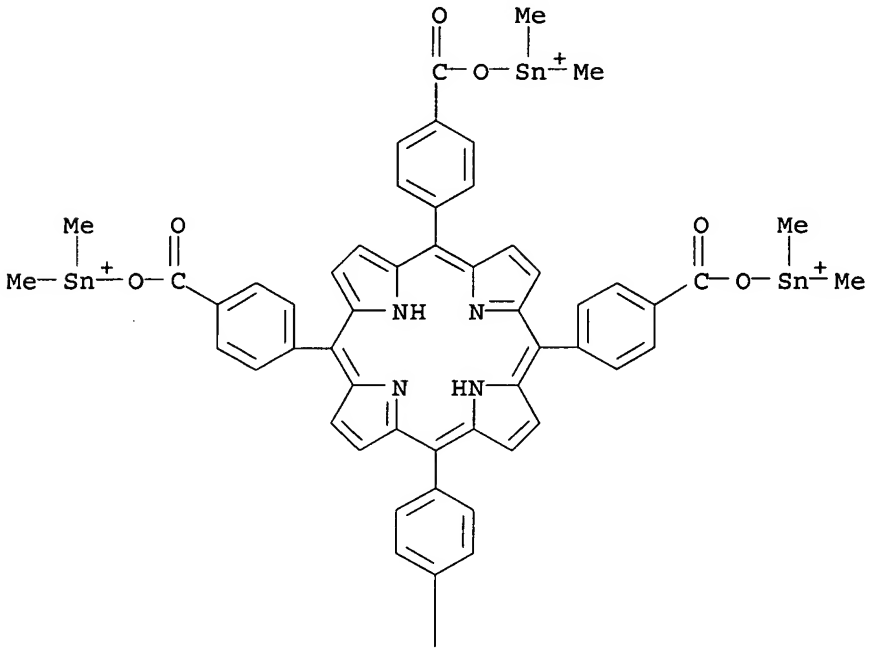


RN 359796-86-4 CAPLUS
CN Stannylium, [21H,23H-porphine-5,10,15,20-tetrayltetrakis(4,1-phenylenecarbonyloxy)]bis[dimethyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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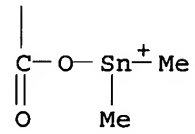
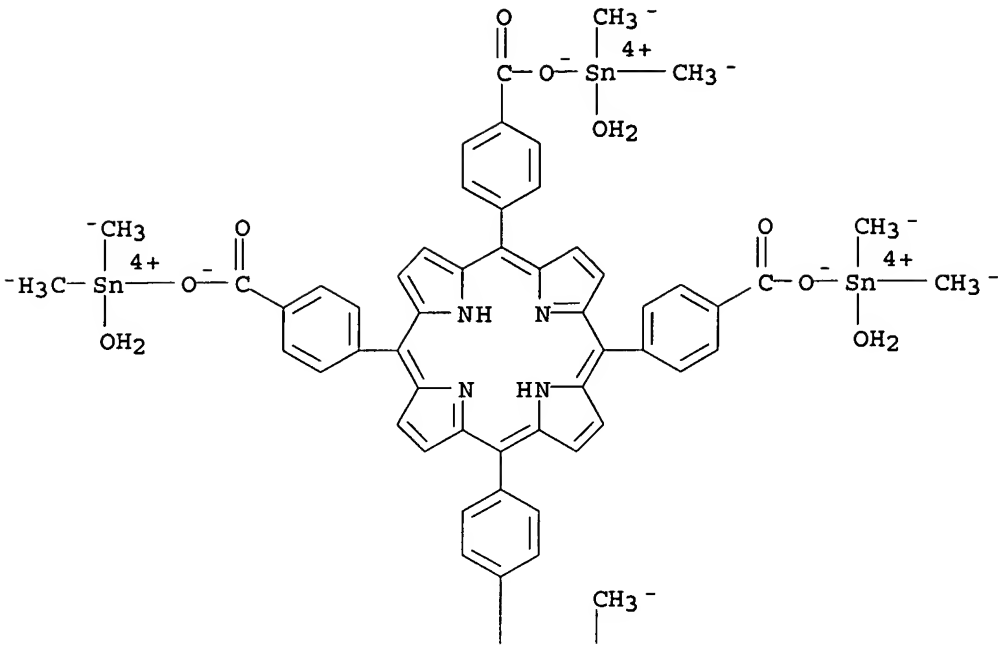


RN 359796-87-5 CAPLUS
CN Tin(4+), tetraaquaoctamethyl[μ4-[[4,4',4'',4'''-(21H,23H-porphine-5,10,15,20-tetrayl)tetrakis[benzoato-κO]](4-)]]tetra- (9CI) (CA INDEX NAME)

PAGE 1-A



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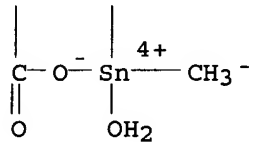


RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:186102 CAPLUS
DN 135:13495
TI Rh(III) Porphyrins as Building Blocks for Porphyrin Coordination Arrays: From Dimers to Heterometallic Undecamers
AU Redman, James E.; Feeder, Neil; Teat, Simon J.; Sanders, Jeremy K. M.
CS Cambridge Centre for Molecular Recognition University Chemical Laboratory, University of Cambridge, Cambridge, CB2 1EW, UK
SO Inorganic Chemistry (2001), 40(11), 2486-2499
CODEN: INOCAJ; ISSN: 0020-1669
PB American Chemical Society
DT Journal
LA English
OS CASREACT 135:13495
AB The coordination chemical of a Rh(III) porphyrin building block was studied with a view to the construction of heterometallic arrays of porphyrins. The Rh(III) porphyrin was found to coordinate MeOH in the solid state and weakly in CDCl3 solution Crystallization afforded five coordinate π stacked Rh(III) porphyrins. The distribution of products from reaction of Rh(III) porphyrin with DABCO, 4,4'-bipyridine, and 4,4'-bipyrimidine could be displaced toward dimeric species by silica gel column chromatog. or recrystn. which served to remove excess ligand. Weak coordination to nitriles was observed, although it was sufficiently strong to organize a dimeric **complex** of 5,5'-dicyano-2,2'-bipyridine in the solid state. **Complexes** with 4,4'-bipyrimidine and 5,5'-dicyano-2,2'-bipyridine possess uncoordinated chelating N atoms. Larger heterometallic porphyrin arrays were assembled using a combination of Sn(IV) and Rh(III) porphyrin coordination chemical A Sn(IV) porphyrin

acted as a core around which were coordinated two isonicotinate groups, carboxylic acid functionalized porphyrins, or porphyrin trimer dendrons. Rh(III) porphyrins were coordinated to pyridyl groups at the periphery of these entities. In this way an eleven porphyrin array, with four different porphyrin metalation states, was assembled. The diamagnetic nature of both the Rh(III) and Sn(IV) porphyrins, the slow ligand exchange kinetics on the NMR time scale, and tight ligand binding permitted the porphyrin arrays to be analyzed by two-dimensional 1H NMR techniques.

IT **340722-15-8P**

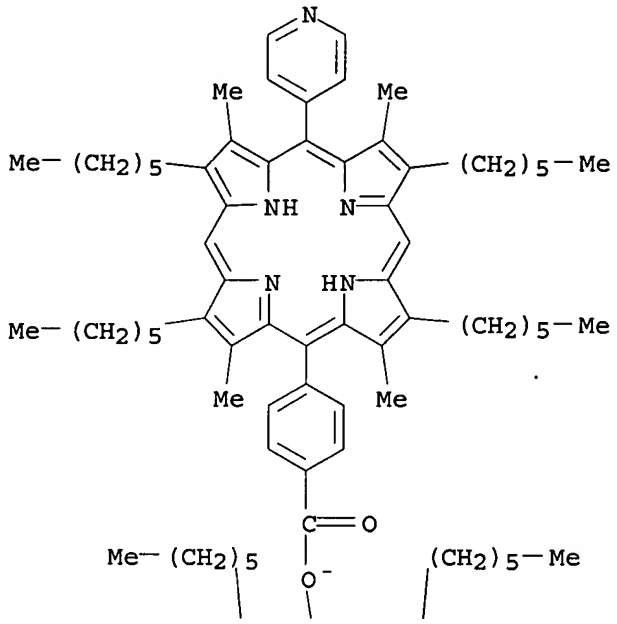
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(for preparation of rhodium(III) porphyrin polynuclear arrays)

RN 340722-15-8 CAPLUS

CN Tin, [2,8,12,18-tetrahexyl-3,7,13,17-tetramethyl-5,15-diphenyl-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[2,8,12,18-tetrahexyl-3,7,13,17-tetramethyl-15-(4-pyridinyl)-21H,23H-porphin-5-yl]benzoato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A



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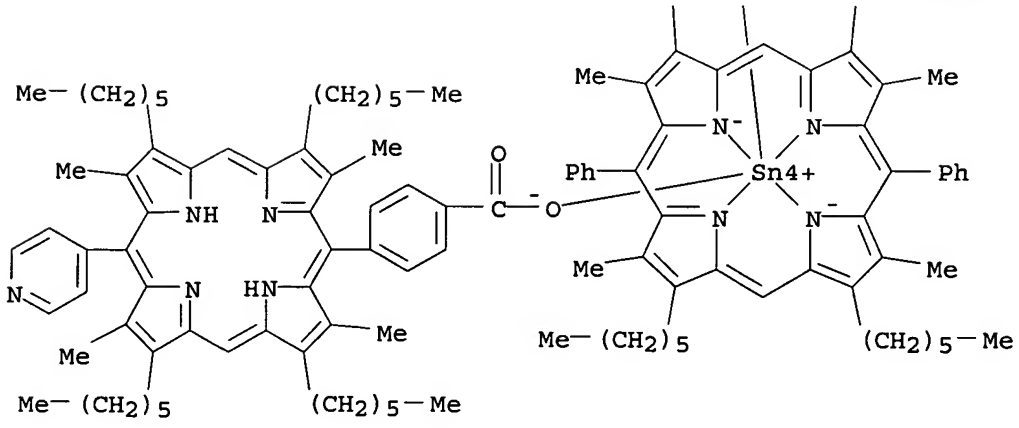
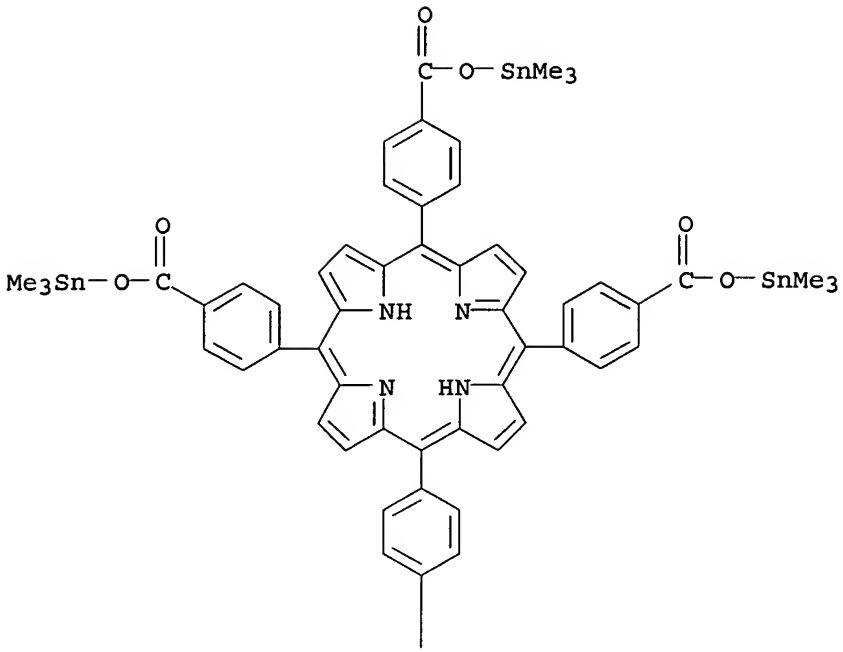


RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:393320 CAPLUS
DN 133:189094
TI Organometallic **complexes** with biological molecules. XIV. Biological activity of dialkyl and trialkyltin(IV) [meso-tetra(4-carboxyphenyl)porphinate] derivatives
AU Mansueto, C.; Puccia, E.; Maggio, F.; Di Stefano, R.; Fiore, T.; Pellerito, C.; Triolo, F.; Pellerito, L.
CS Dipartimento di Biologia Animale, Universita di Palermo, Palermo, 90123, Italy
SO Applied Organometallic Chemistry (2000), 14(5), 229-235
CODEN: AOCHEX; ISSN: 0268-2605
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB The effects of several organotin(IV) [meso-tetra(4-carboxyphenyl)porphinate] derivs. with the general formula (R2Sn)2TPPC and (R3Sn)4TPPC (R = Me, Bu, Ph) were tested in vivo on ascidian embryonic development. Embryos at the two-cell stage were incubated in 1 + 10-5 or 1 + 10-7 M solns. of various compds. The ligand, [meso-tetra(4-carboxyphenyl)porphine] (H4TPPC) was toxic at 1 + 10-5 M, because development was blocked at an early gastrula stage, whereas 1 + 10-7 M H4TPPC allowed the eggs to develop up to the larva stage. The most toxic among the tested compds. was tributyltin(IV) [meso-tetra(4-carboxyphenyl)porphinate], (Bu3Sn)4TPPC, since the fertilized eggs were unable to divide into two cells, even at a concentration of 1 + 10-7 M. To correlate this embryonic arrest with the metabolic pathway, and especially to understand why cellular organelles first under-went chemical damage, 10-5 and 10-7 M (Bu3Sn)4TPPC-cultured fertilized eggs were tested for DNA, RNA, protein, glucose, lipid and ATP contents, comparing the values obtained with those of control culture fertilized egg contents. The higher concentration (1 + 10-5 M) reduced the content of all the tested compds., but the lower one (1 + 10-7 M), even if still unable to allow cleavage, reduced only the lipids and the ATP contents. A hypothesis concerning initial damage to mitochondrial membrane is proposed.
IT **193556-04-6 193556-06-8 193556-08-0**
**193701-90-5 193701-91-6 193701-92-7**
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(organotin(IV) derivs. effects on ascidian embryo development)
RN 193556-04-6 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(trimethylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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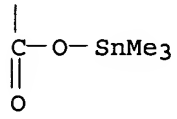
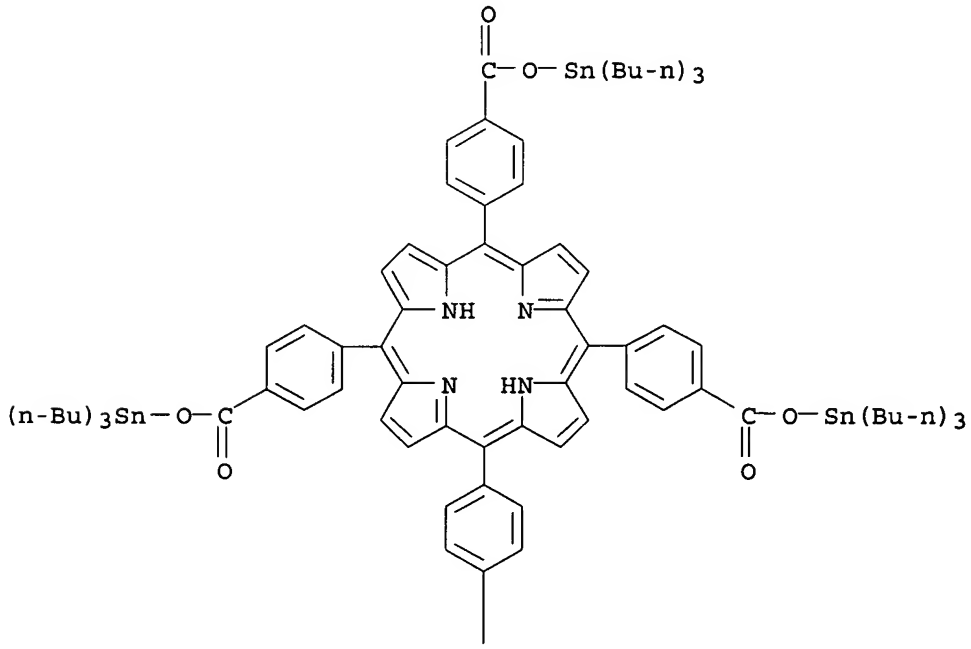


RN 193556-06-8 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(tributylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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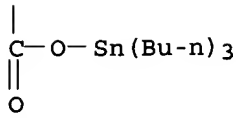
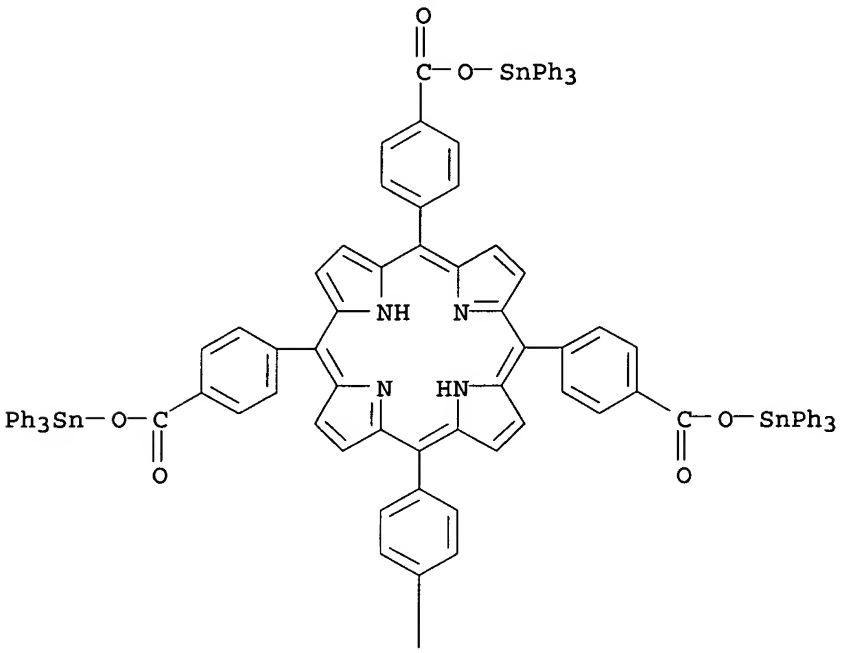


RN 193556-08-0 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(triphenylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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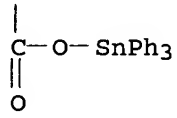
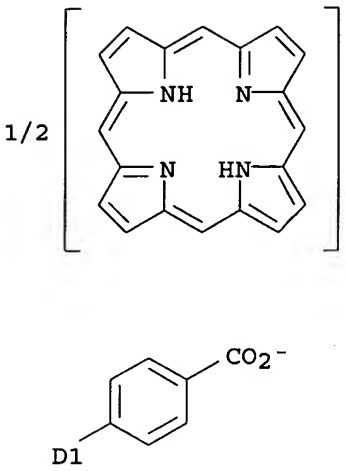


RN 193701-90-5 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A



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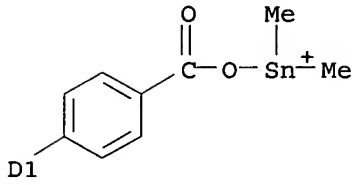
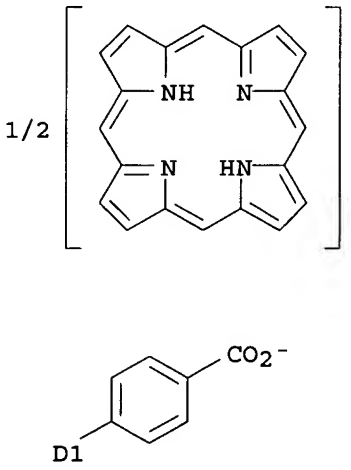


RN 193701-91-6 CAPLUS

CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dibutyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A



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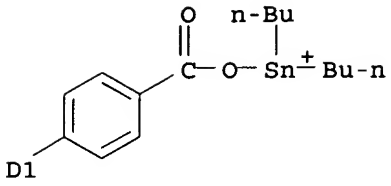
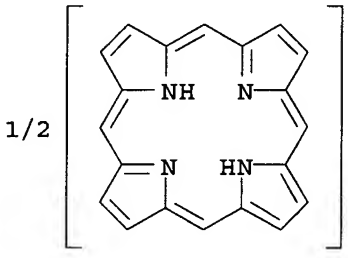
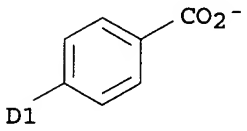



RN 193701-92-7 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[diphenyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A

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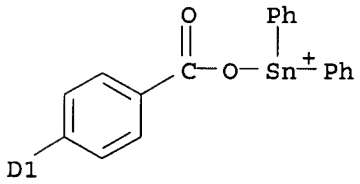



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:673698 CAPLUS
DN 132:45947
TI Organometallic **complexes** with biological molecules: XIII. Organotin(IV)[meso-tetra(4-carboxyphenyl)porphinate]s and the cell cycle: a flow-cytometric approach
AU Triolo, F.; Pellerito, C.; Stocco, G. C.; Fiore, T.; Maggio, F.; Pellerito, L.; Triolo, R.
CS Dipartimento di Chimica Inorganica, Universita di Palermo, Palermo, 90128, Italy
SO Applied Organometallic Chemistry (1999), 13(10), 733-738
CODEN: AOCHEX; ISSN: 0268-2605
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB The cytotoxic derivs. diorganotin(IV) and triorganotin(IV) meso-tetra(4-carboxyphenyl)-porphinates, with stoichiometries [R2Sn]2TPPC

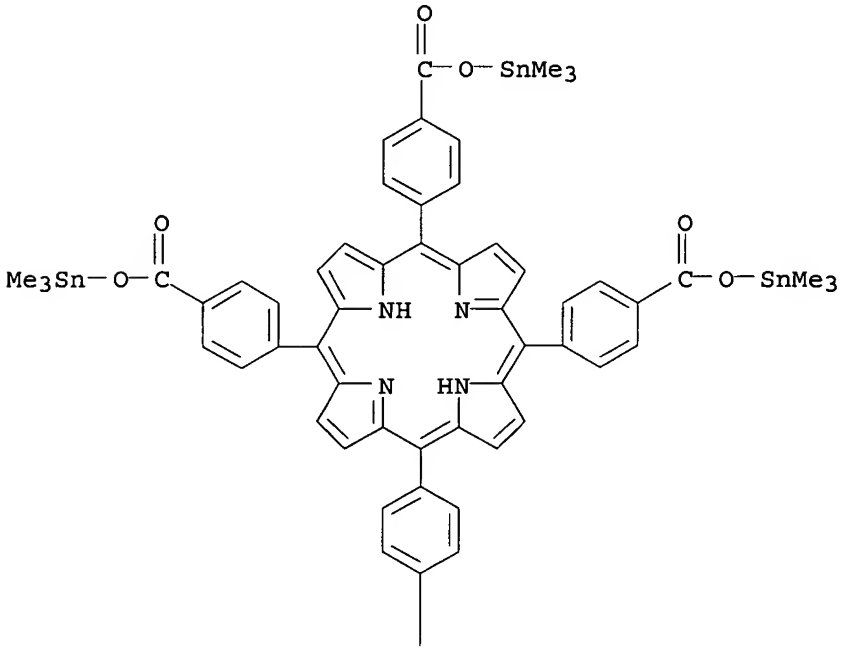
and [R3Sn]4TPPC [R = Me, Bu, Ph; TPPC4- = meso-tetra(4-carboxyphenyl)porphinate4-], namely bis[dimethyltin(IV)], bis[dibutyltin(IV)], bis[diphenyltin(IV)], tetra[trimethyltin(IV)], tetra[tributyltin(IV)] and tetra[triphenyltin(IV)] [meso-tetra(4-carboxyphenyl)porphinate]s, have been used to investigate their effects on the cultured human kidney cell cycle in order to understand further the origin of cell growth inhibition induced by the abovementioned chems. The cell cycle-dependent DNA content distribution of cultured cells exposed to these compds. has been analyzed through flow cytometry, a potent technique capable of probing several aspects of drug-induced cytotoxicity. Cultured human kidney cells have been used as a model system, on the premise of greater physiol. similarity to the human situation in vivo.

IT **193556-04-6 193556-06-8 193556-08-0**
**193701-90-5 193701-91-6 193701-92-7**
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(organotin(IV)[meso-tetra(4-carboxyphenyl)porphinate]s and cell cycle)

RN 193556-04-6 CAPLUS

CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(trimethylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

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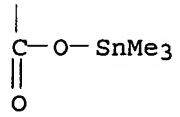
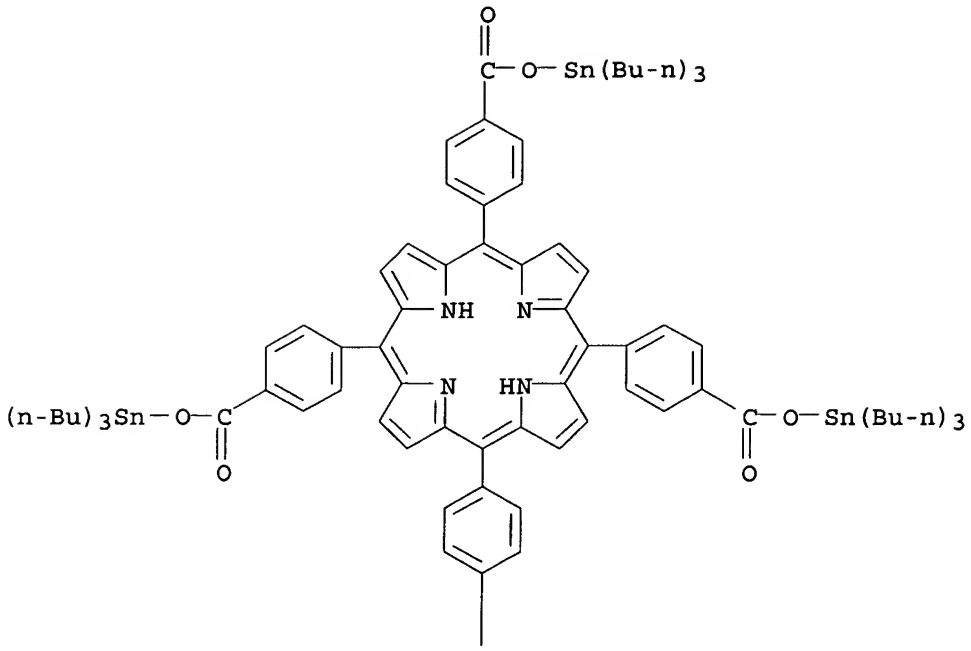



RN 193556-06-8 CAPLUS

CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(tributylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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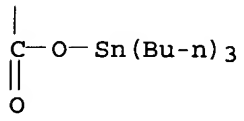
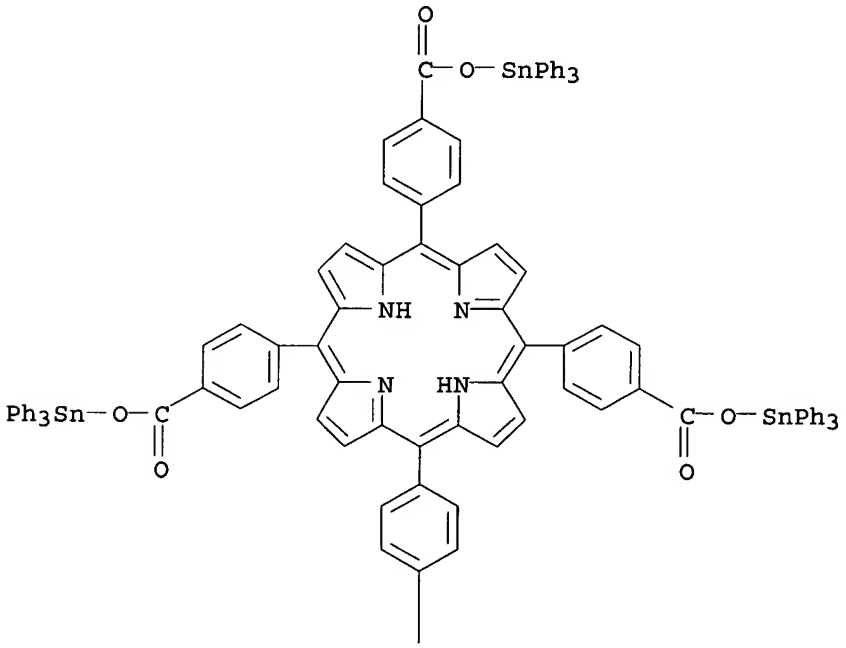


RN 193556-08-0 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(triphenylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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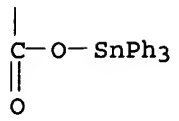
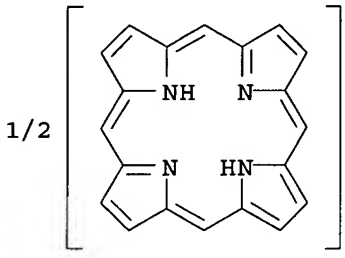
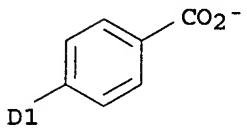


RN 193701-90-5 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A





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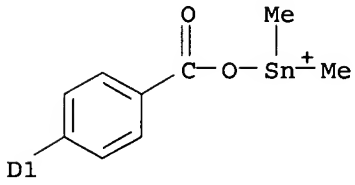
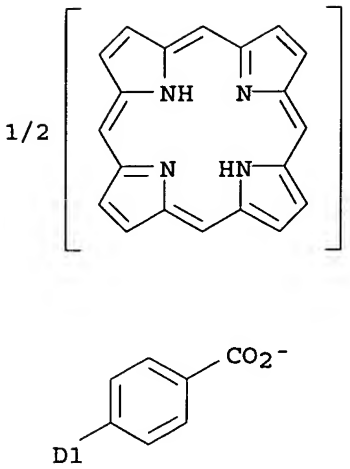


RN 193701-91-6 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dibutyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A

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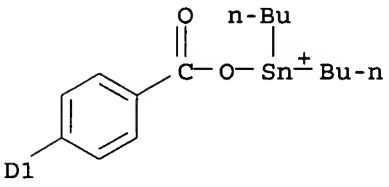
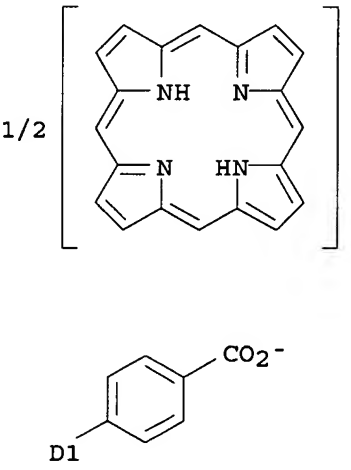
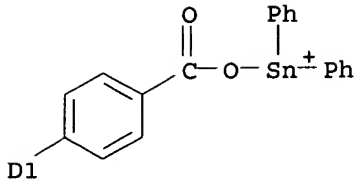



RN 193701-92-7 CAPLUS

CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[diphenyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A

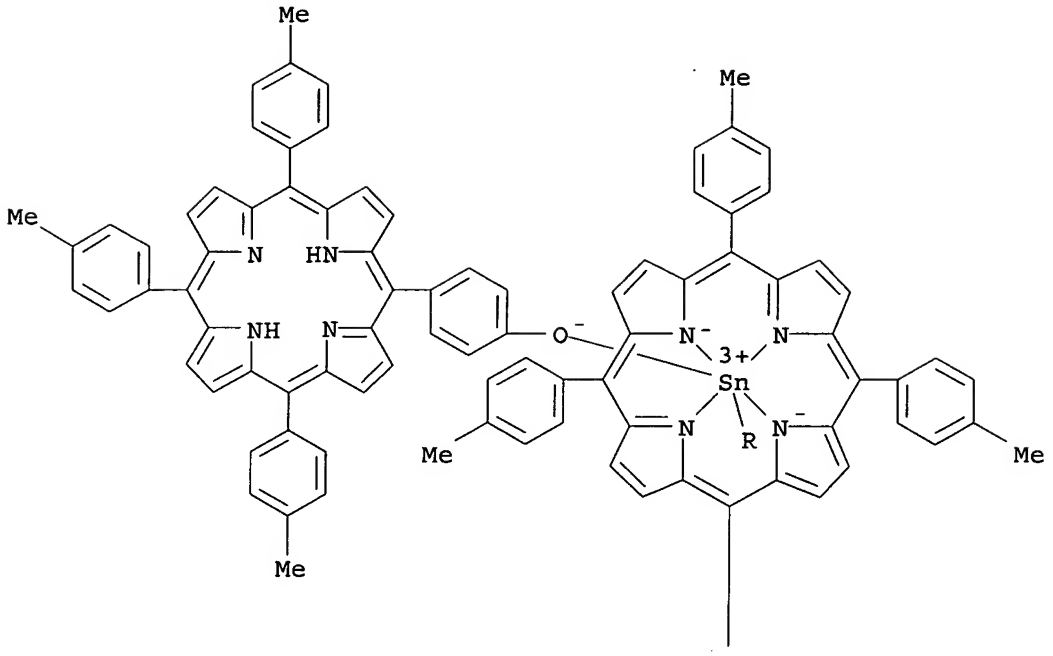




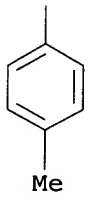

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:649500 CAPLUS
DN 131:345713
TI "Axial-Bonding"-Type Hybrid Porphyrin Arrays: Synthesis, Spectroscopy, Electrochemistry, and Singlet State Properties
AU Giribabu, L.; Rao, T. Anita; Maiya, Bhaskar G.
CS School of Chemistry, University of Hyderabad, Hyderabad, 500 046, India
SO Inorganic Chemistry (1999), 38(22), 4971-4980
CODEN: INOCAJ; ISSN: 0020-1669
PB American Chemical Society
DT Journal
LA English
AB P(V), Ge(IV), and Sn(IV) porphyrin-based, axial-bonding-type hybrid trimers were readily constructed by employing a new building-block approach. The approach is modular in nature, and it involves simple inorg. reactions such as axial bond formation of main group element containing porphyrins and insertion of metal/metalloid ions into the porphyrin cavity. The architecture of these arrays is such that, while a P(V), Ge(IV), or Sn(IV) **complex** of meso-5,10,15,20-(tetratolyl)porphyrin forms the basal scaffolding unit, the free-base, vanadyl, Co(II), Ni(II), Cu(II), or Zn(II) porphyrins occupy the two axial sites via an aryloxy bridge. Synthesis of an all-P array containing three P(V) subunits also was accomplished. Each new porphyrin array studied was fully characterized by various phys. methods that include mass (FAB), UV-visible, IR, fluorescence, ESR, and 1H and 31P NMR (NMR; 1-dimensional and 2D) spectroscopies and cyclic voltammetry. The UV-visible and ESR spectral parameters and also the redox potential data suggest that there exists no interaction between the π-planes of the constituent monomeric porphyrins in these arrays. Detailed 1H NMR studies carried out with the trimers containing diamagnetic porphyrins reveal characteristic shielding/deshielding effects for the various protons on the axial porphyrin subunits. The ground state data, as probed by the spectroscopic and electrochem. techniques, collectively indicate that there exists a sym. but nonparallel disposition of the two axial porphyrins with respect to plane of the central porphyrin. Singlet state activity of the photoactive trimers was probed by the steady state fluorescence method with selective excitation into the bands corresponding to the two constituent monomeric species. Anal. of the fluorescence emission and excitation spectral data suggests the occurrence of electronic energy transfer as well as photoinduced electron transfer reactions in trimers endowed with free-base or Zn(II) porphyrin axial subunits. Efficiencies of the excited state processes of these trimeric arrays are dependent on the type of metal/metalloid ions present in the porphyrin crevice.
IT **250220-04-3 250220-05-4 250220-77-0**
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(elec. potential of couple containing)
RN 250220-04-3 CAPLUS
CN Stannate(1-), [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

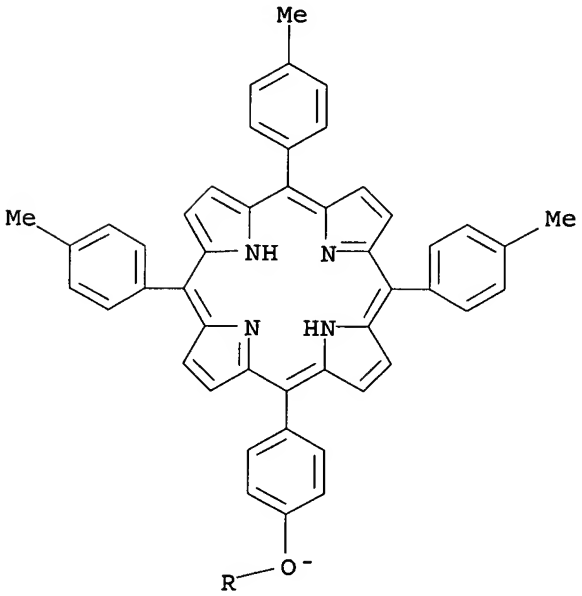
PAGE 1-A




PAGE 2-A



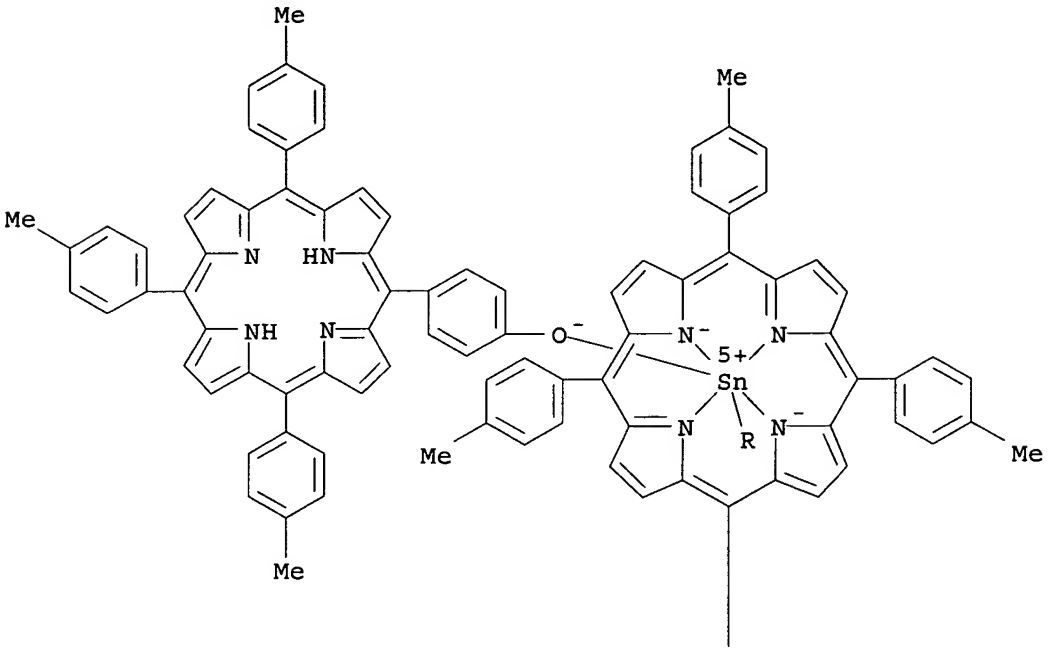

PAGE 3-A



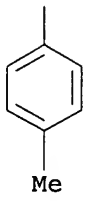

RN 250220-05-4 CAPLUS

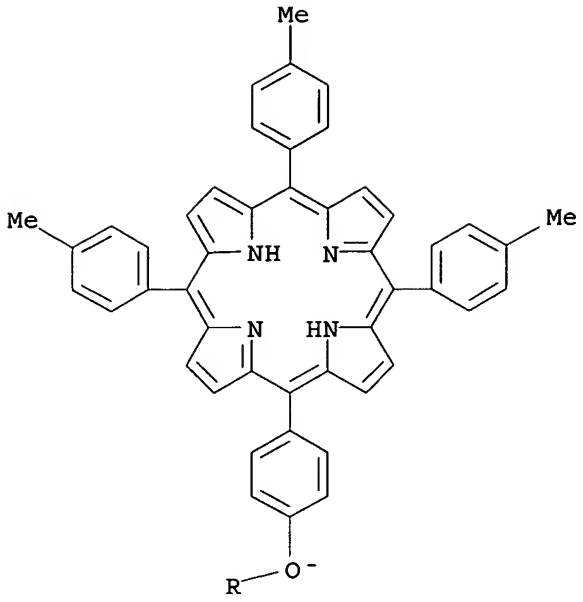
CN Tin(1+), [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A



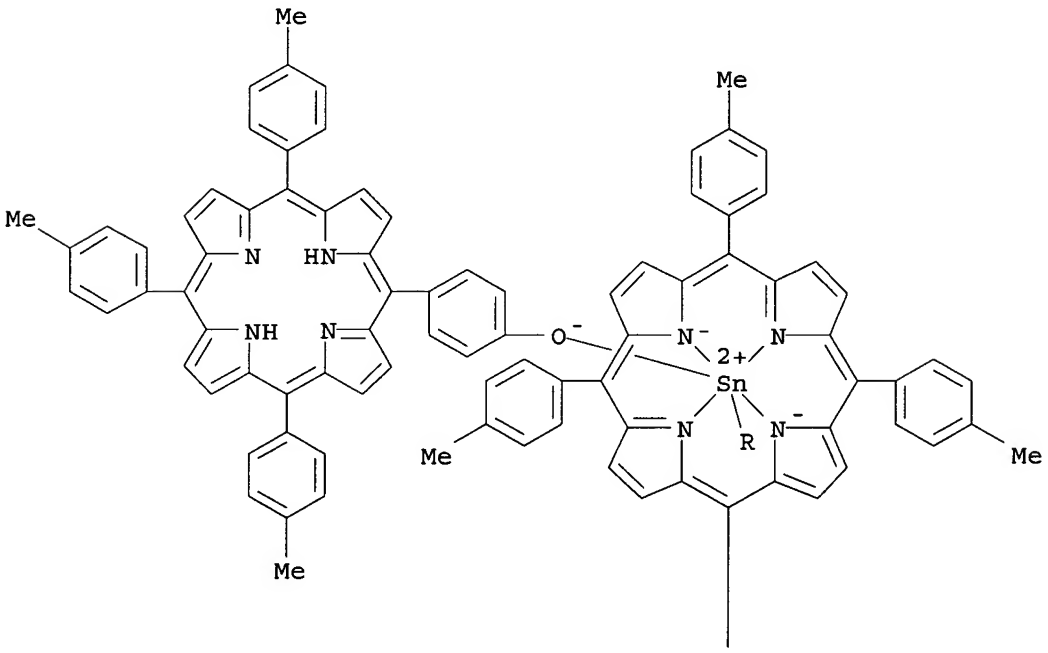

PAGE 2-A



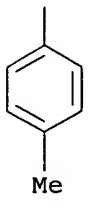



RN 250220-77-0 CAPLUS
CN Stannate(2-), [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)





PAGE 2-A

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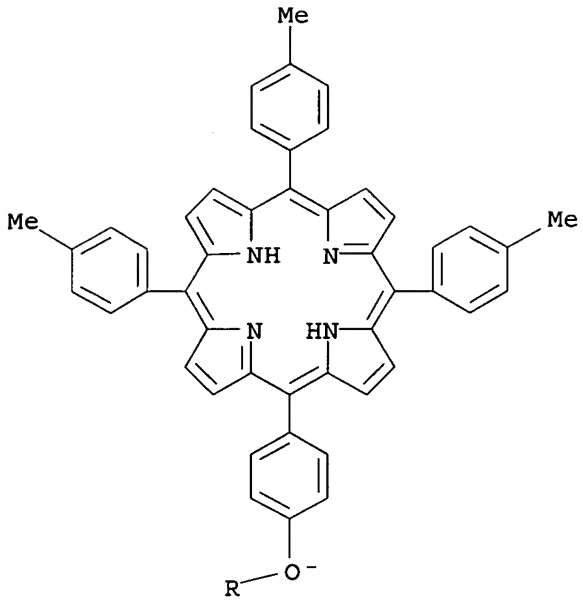
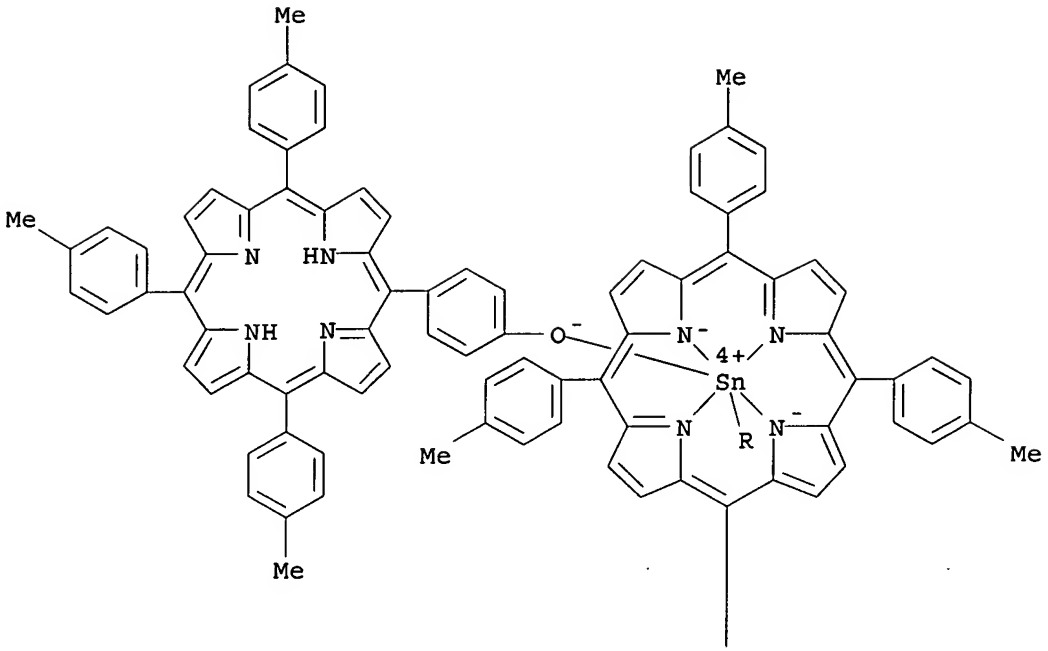



IT **250219-89-7P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and NMR and cyclic voltammetry and fluorescence)

RN 250219-89-7 CAPLUS

CN Tin, [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A

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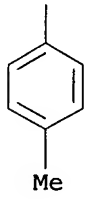
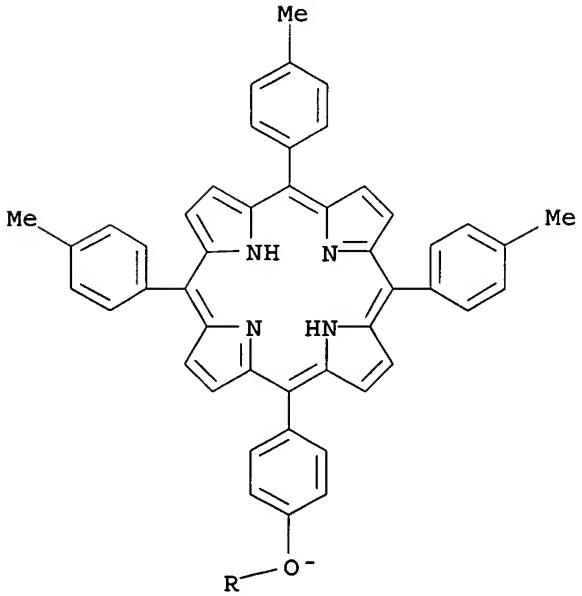



PAGE 3-A

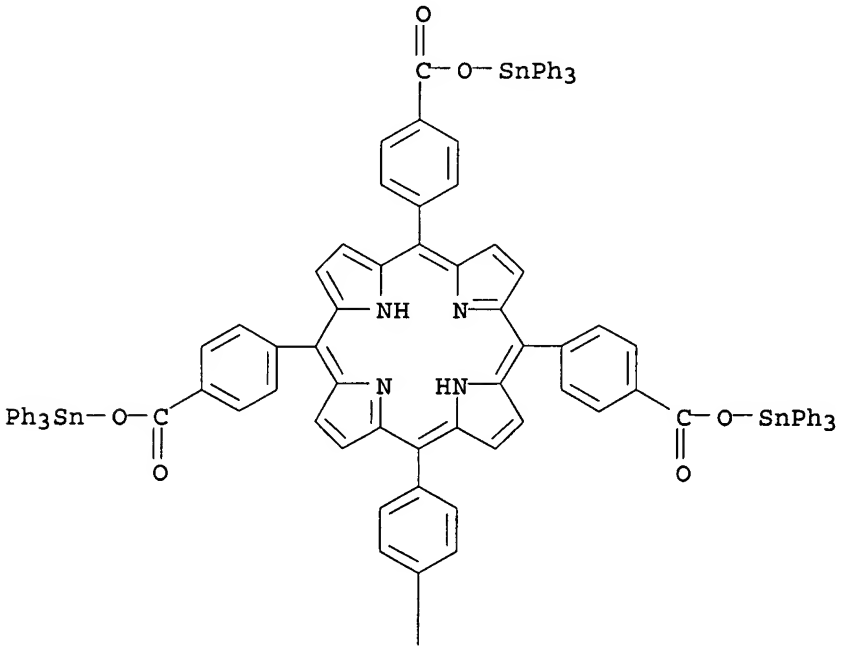



RE.CNT 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:622176 CAPLUS
DN 127:205642
TI Organometallic **complexes** with biological molecules: VII. diorgano- and triorgano-tin(IV)[meso-tetra(4-carboxyphenyl)porphinate] derivatives: solid-state, solution-phase structural aspects and in vivo effects. [Erratum to document cited in CA127:161912]
AU Mirisola, M. G.; Pellerito, A.; Fiore, T.; Stocco, G. C.; Pellerito, L.; Cestelli, A.; Diliegro, I.
CS Dipartimento di Chimica Inorganica, Universita di Palermo, Palermo, 90123, Italy
SO Applied Organometallic Chemistry (1997), 11(9), 757
CODEN: AOCHEX; ISSN: 0268-2605
PB Wiley
DT Journal
LA English
AB The title of the paper published in Applied Organometallic Chemical 11, 499-511 (1997) has been corrected as above.
IT **193556-08-0P 193701-90-5P 193701-91-6P 193701-92-7P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and solid-state and solution-phase structural aspects of (Erratum))
RN 193556-08-0 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(triphenylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

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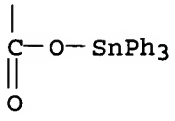
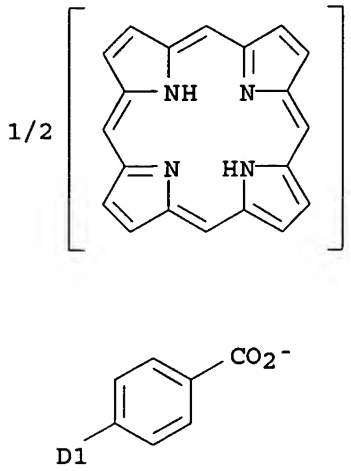


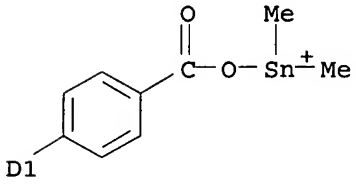

RN 193701-90-5 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-

5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A



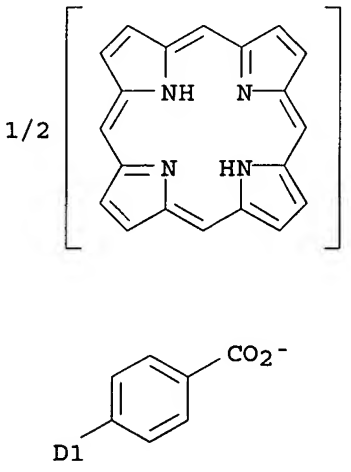

PAGE 2-A




RN 193701-91-6 CAPLUS

CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dibutyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A



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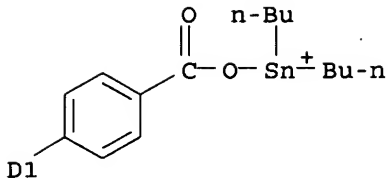
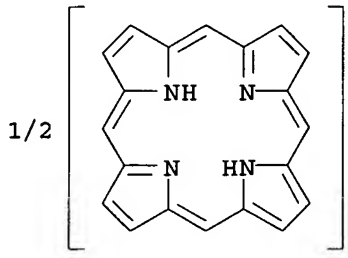
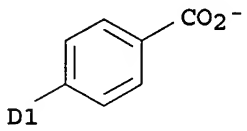


RN 193701-92-7 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[diphenyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A





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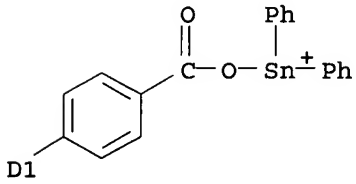
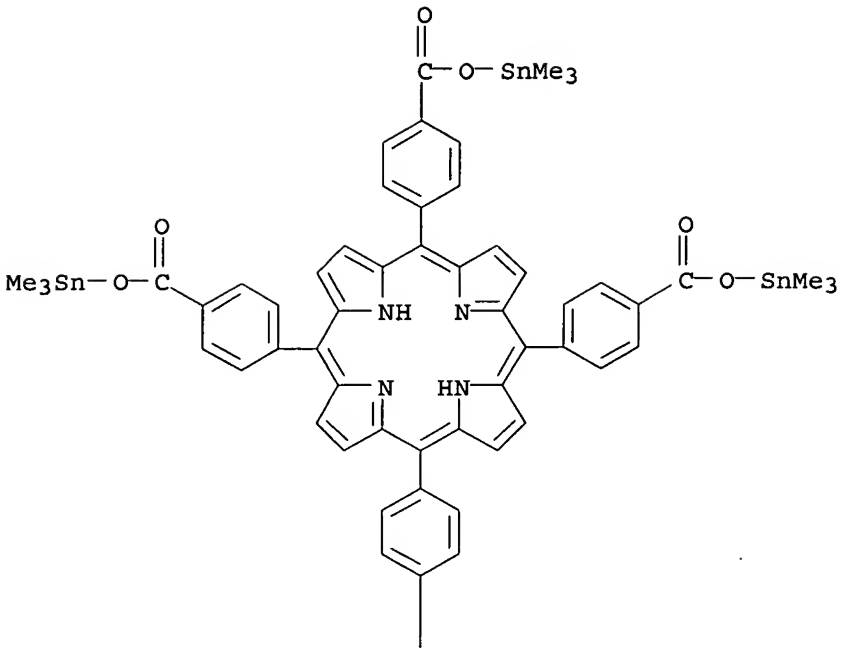


IT **193556-04-6P 193556-06-8P**
RL: ADV (Adverse effect, including toxicity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, cytotoxicity and solid-state and solution-phase structural aspects of (Erratum))
RN 193556-04-6 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(trimethylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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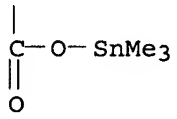
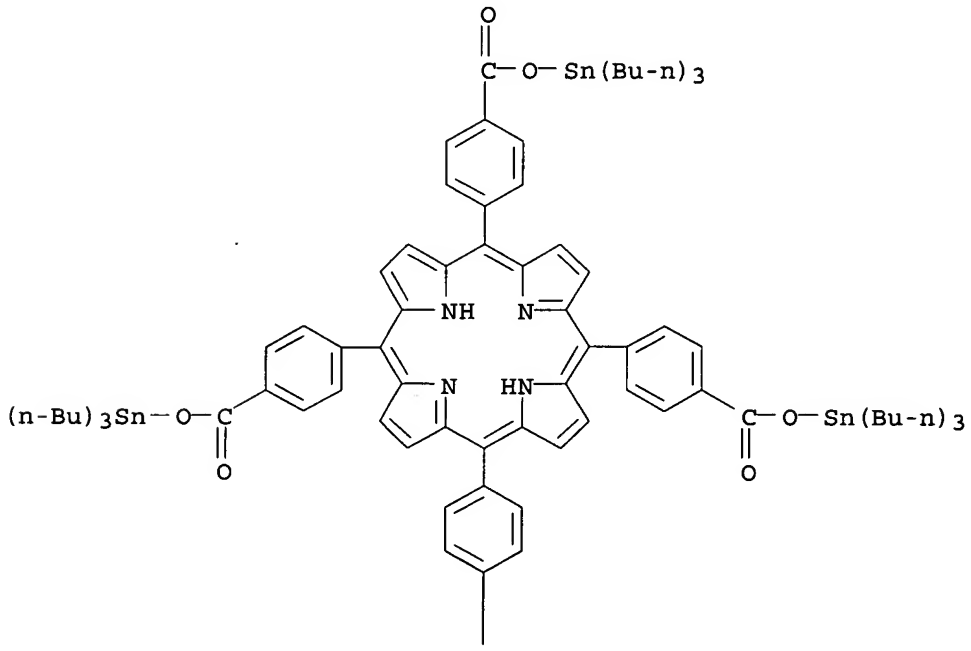
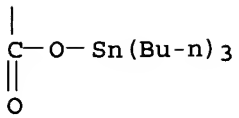


RN 193556-06-8 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(tributylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

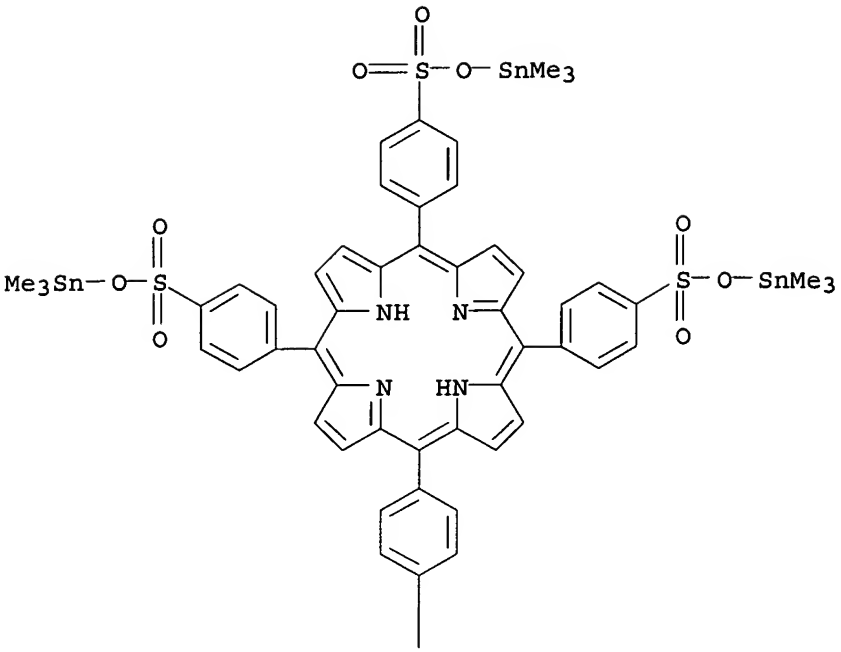
PAGE 1-A





L8 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:622167 CAPLUS
DN 127:307431
TI Organometallic **complexes** with biological molecules. IX. Diorgano- and triorgano-tin(IV)[meso-tetra (4-sulfonatophenyl)porphinate] derivatives: solid-state and solution-phase structural aspects and in vivo effects
AU Pellerito, A.; Fiore, T.; Giuliani, A. M.; Maggio, F.; Pellerito, L.; Mansueto, C.
CS Dipartimento di Chimica Inorganica, Universita di Palermo, Palermo, 90123, Italy
SO Applied Organometallic Chemistry (1997), 11(9), 707-719
CODEN: AOCHEX; ISSN: 0268-2605
PB Wiley
DT Journal
LA English
AB Diorgano- and triorgano-tin(IV) derivs. of meso-tetra(4-sulfonatophenyl)porphine (H4TPPS) with general formula (R2Sn)2TPPS and (R3Sn)4TPPS (TPPS4-=[meso-tetra(4-sulfonatophenyl)porphinate]4-, R = Me, Bu, Ph) have been obtained and their solid-state configuration inferred on the basis of IR and Moessbauer spectroscopy, while solution-phase studies have been carried out by 1H and 13C NMR in DMSO-d6, together with determination of the in vivo cytotoxicity of the new derivs. towards embryonic development of Ciona intestinalis. In particular, octahedral and trigonal-bipyramidal eq-R3Sn polymeric configurations are proposed, in the solid state, resp. for (R2Sn)2TPPS and (R3Sn)4TPPS **complexes**, with the arylsulfonate groups behaving as monoanionic bidentate bridging ligands. The 1H and 13C NMR data lead to the conclusion that the metal-to-ligand ratio (2:1 or 4:1), binding site (the sulfonato-group oxygens), and the coordination polyhedron around the metal (trans-octahedral or trigonal-bipyramidal) found in the solid state are preserved in solution
IT **196958-67-5P 196958-68-6P 196958-69-7P**
**197184-11-5P 197184-12-6P 197256-27-2P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, solid-state and solution-phase structural aspects, and in vivo effects of diorgano- and triorgano-tin [tetra(sulfonatophenyl)porphinate] derivs.)
RN 196958-67-5 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(trimethylstannyl)oxy]sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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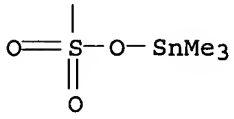
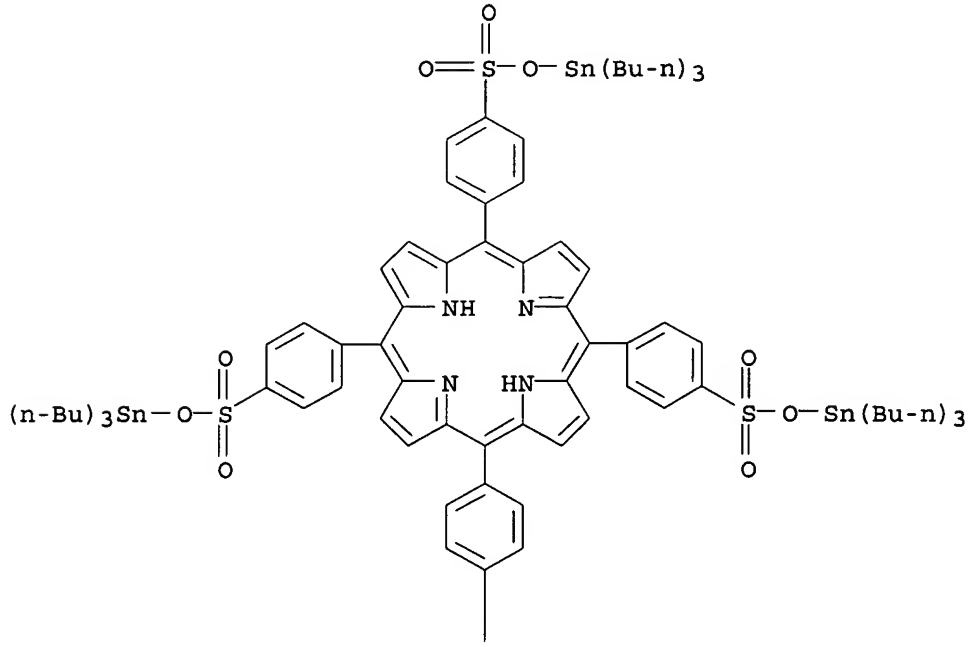


RN 196958-68-6 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(tributylstannyl)oxy]sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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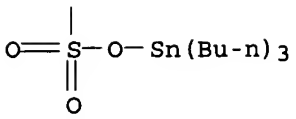
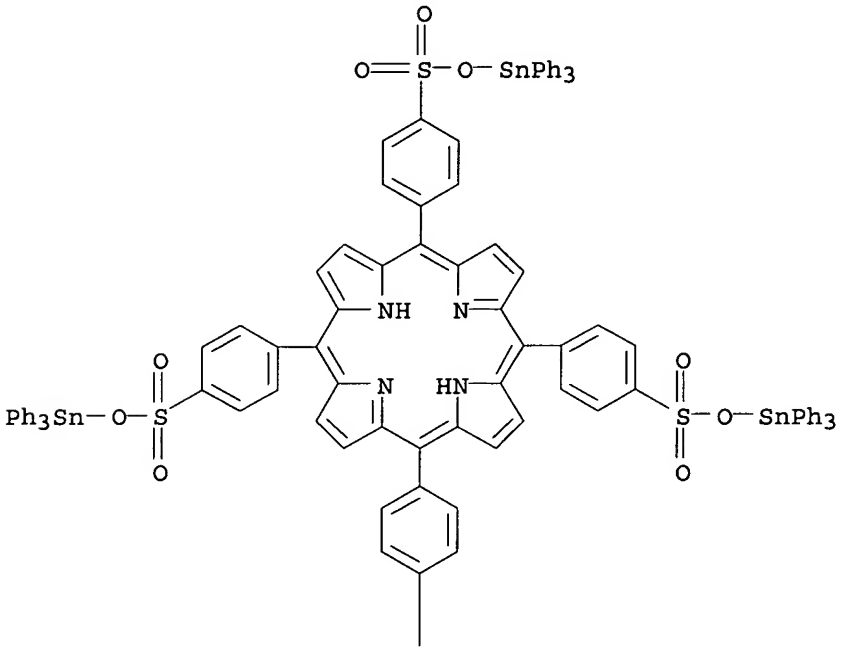


RN 196958-69-7 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(triphenylstannyl)oxy]sulfonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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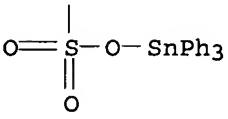
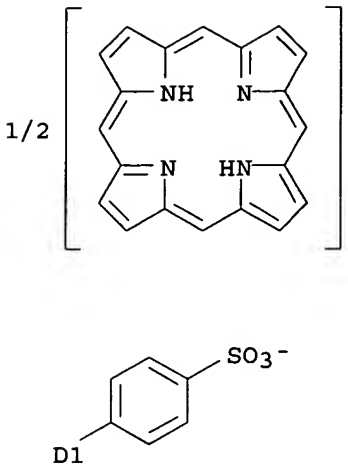
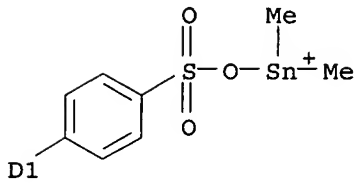


RN 197184-11-5 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-sulfophenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenesulfonyloxy)]bis[dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A

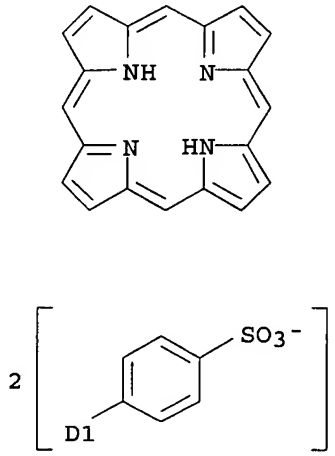



PAGE 2-A




RN 197184-12-6 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-sulfophenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenesulfonyloxy)]bis[dibutyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A



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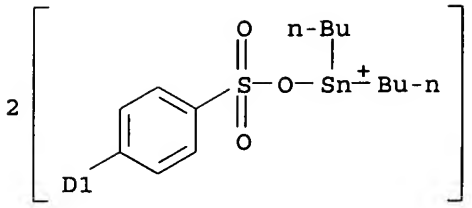
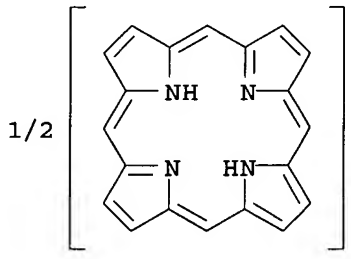
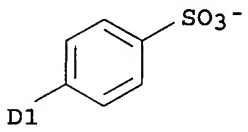


RN 197256-27-2 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-sulfophenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenesulfonyloxy)]bis[diphenyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A





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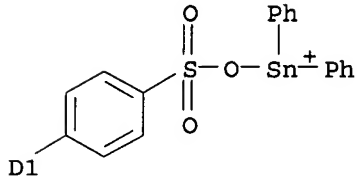


RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:431711 CAPLUS
DN 127:161912
TI Organometallic **complexes** with biological molecules. VII. Dialkyl- and trialkyl-tin(IV)[meso-tetra(4-carboxyphenyl)porphinate] derivatives: solid-state, solution-phase structural aspects and in vivo effects
AU Mirisola, M. G.; Pellerito, A.; Fiore, T.; Stocco, G. C.; Pellerito, L.; Cestelli, A.; Di Liegro, I.
CS Dipartimento di Chimica Inorganica, Universita di Palermo, Palermo, 90123, Italy
SO Applied Organometallic Chemistry (1997), 11(6), 499-511
CODEN: AOCHEX; ISSN: 0268-2605
PB Wiley
DT Journal
LA English

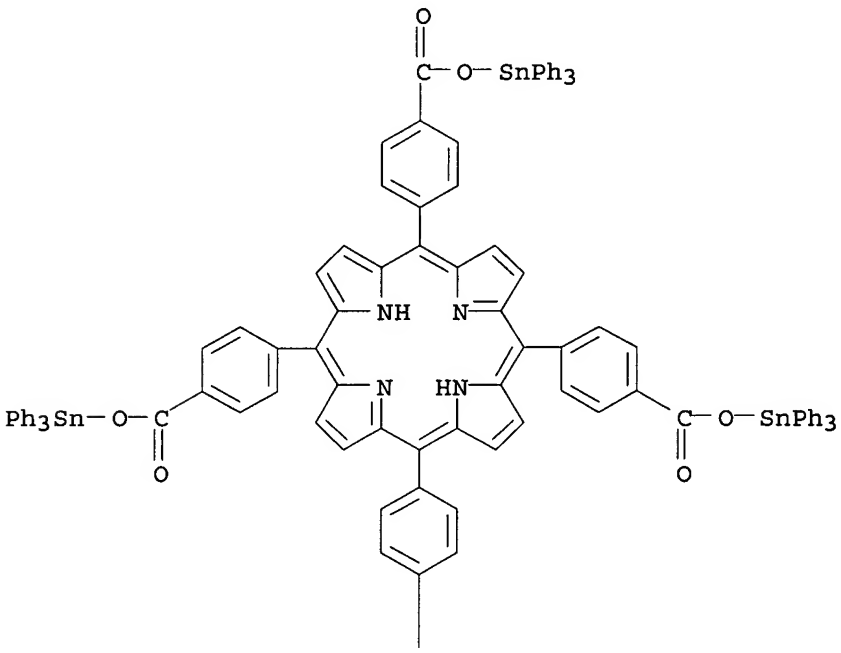
AB The synthesis, the structural features and the in vivo biol. activity of diorganotin(IV) and triorganotin(IV) derivs. of [meso-tetra(4-carboxyphenyl)porphine] (H4TPPC) are reported. (R2Sn)2TPPC and (R3Sn)4TPPC (R = Me, Bu, and Ph) were obtained, and the main information extracted from the IR and Moessbauer spectral data, in the solid state, was in favor of the occurrence of five-coordinated Sn(IV) atoms, in a polymeric trigonal-bipyramidal configuration, attained through two differently coordinated, ester-type and chelating, resp., carboxylate anions in [R2Sn]2TPPC, while in [Alk3Sn]4TPPC five-coordination of the Sn(IV) atom is reached through bridging carboxylate groups. 1H and 13C NMR spectra, in DMSO-d6 or CDCl3 suggested that the soluble derivs., at room temperature or at 342 K, were present in solution as simple monomers. The interactions of (trimethyltin)4[meso-tetra(4-carboxyphenyl)porphinate] (TMTPPC) and (tributyltin)4[meso-tetra(4-carboxyphenyl)porphinate] (TBTPPC) with Bluescript KS(+) plasmid and cultured 3T3 fibroblasts were studied. Both compds. have a clear inhibitory effect on the growth of cultured mouse embryonal fibroblasts (NIH-3T3), TBTPPC being much more active. No evidence was found, however, for DNA cleavage by the compds. at molar ratios ≤1:10 (TMTPPC, TBTPPC/DNA base pairs). According to the authors' observations, the cytotoxicity of TBTPPC and TMTPPC does not seem to be based on direct interaction with DNA.

IT **193556-08-0P 193701-90-5P 193701-91-6P 193701-92-7P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and solid-state and solution-phase structural aspects of)

RN 193556-08-0 CAPLUS

CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(triphenylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

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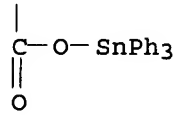
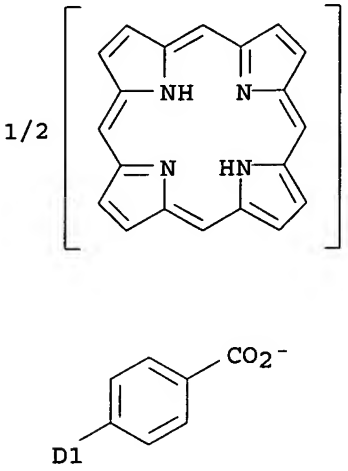



RN 193701-90-5 CAPLUS

CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-

5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A

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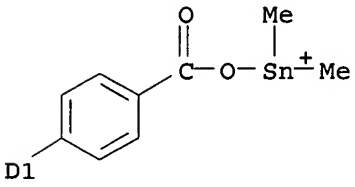
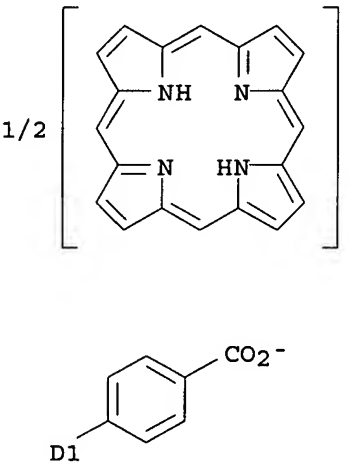



RN 193701-91-6 CAPLUS

CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dibutyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A



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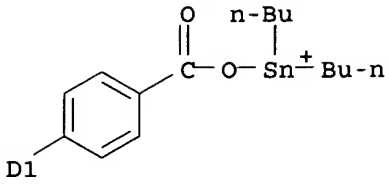
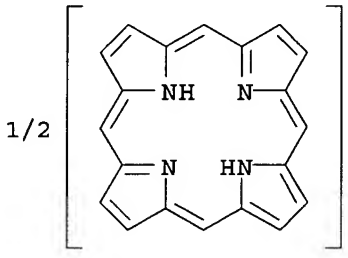
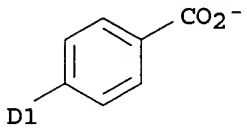


RN 193701-92-7 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[diphenyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A





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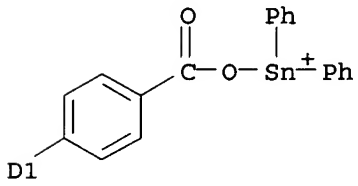
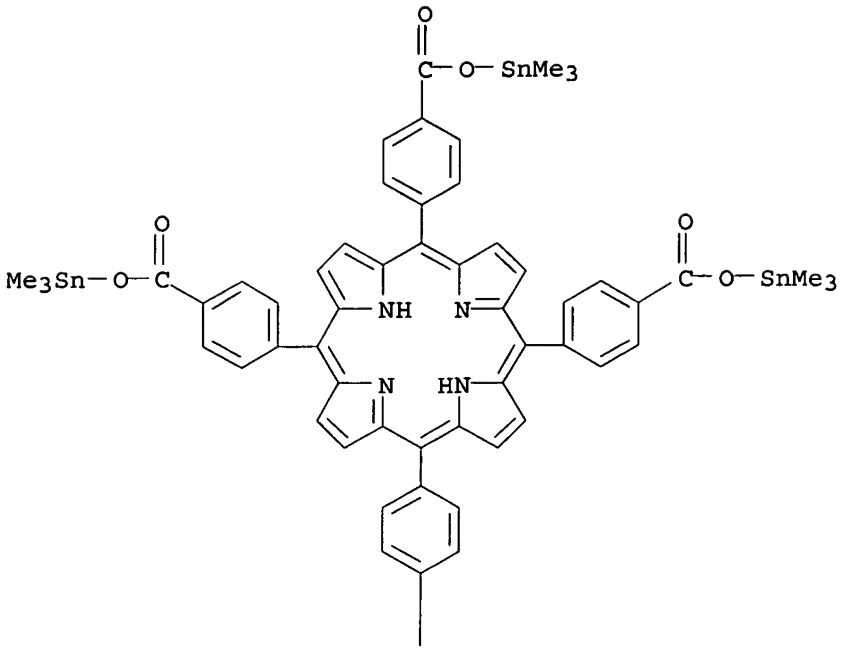


IT **193556-04-6P 193556-06-8P**
RL: ADV (Adverse effect, including toxicity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, cytotoxicity and solid-state and solution-phase structural aspects of)
RN 193556-04-6 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(trimethylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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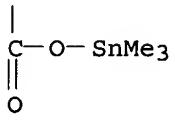
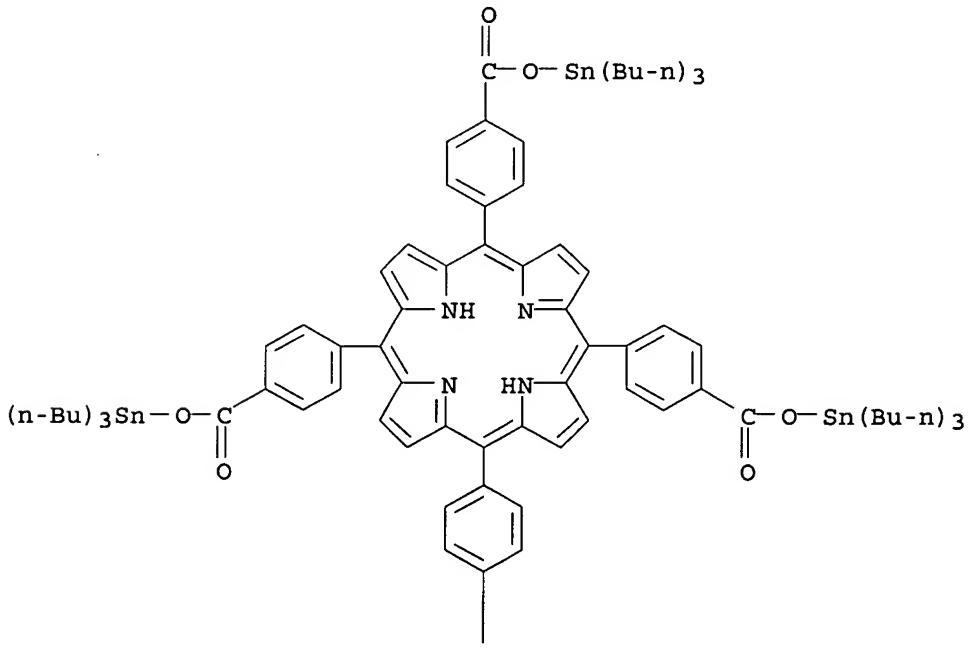
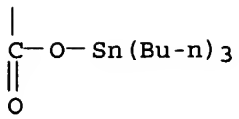


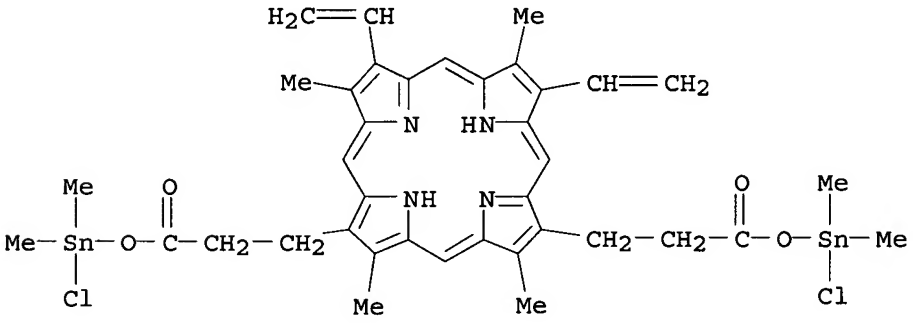
RN 193556-06-8 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(tributylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

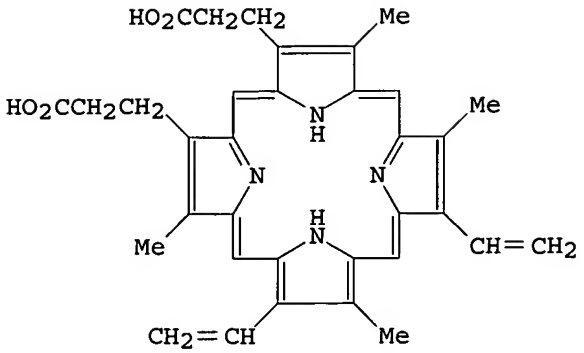




L8 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:643445 CAPLUS
DN 119:243445
TI Chemically induced chromosome damage in early-developing embryos of Anilocra physodes L. (Crustacea, isopoda) following exposure to bis[dimethyltin(IV)chloro]protoporphyrin IX
AU Vitturi, R.; Catalano, E.; Lo Conte, M. R.; Pellerito, L.
CS Ist. Zool., Univ. Palermo, Palermo, 90123, Italy
SO Applied Organometallic Chemistry (1993), 7(5), 295-301
CODEN: AOCHEX; ISSN: 0268-2605
DT Journal
LA English
AB In order to obtain chromosome prepns. from early-developing embryos of A. physodes, a squash technique has been successfully employed. Results gathered after exposure of this material to bis[dimethyltin(IV)chloro]prot oporphyrin IX {[(CH3)2SnCl]2·Protoporphyrin IX} solns. at different exposure times suggest that this chemical **complex** is capable of producing abnormal metaphase and anaphase figures in proportion to its concentration and not to exposure length. Essentially, all of the chromosome abnormalities are classifiable as chromosome fragments mainly observed at the metaphase stage; chromosome bridges; and large decondensed chromosome regions.
IT **148873-23-8**
RL: BIOL (Biological study)
(chromosome aberrations in crustacean embryo induction by)
RN 148873-23-8 CAPLUS
CN 21H,23H-Porphine, 2,8-bis[3-[(chlorodimethylstannyl)oxy]-3-oxopropyl]-12,17-diethenyl-3,7,13,18-tetramethyl- (9CI) (CA INDEX NAME)



L8 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:495690 CAPLUS
DN 119:95690
TI Organometallic **complexes** with biological molecules. I. Diorganotin(IV) chloro protoporphyrin IX **complexes**: solid-state and solution-phase characterization
AU Pellerito, Lorenzo; Pellerito, Alessandro; Maggio, Francesco; Beltramini, Mariano; Salvato, Benedetto; Ricchelli, Fernanda
CS Dip. Chim. Inorg., Univ. Palermo, Palermo, I-90123, Italy
SO Applied Organometallic Chemistry (1993), 7(2), 79-84
CODEN: AOCHEX; ISSN: 0268-2605
DT Journal
LA English
GI



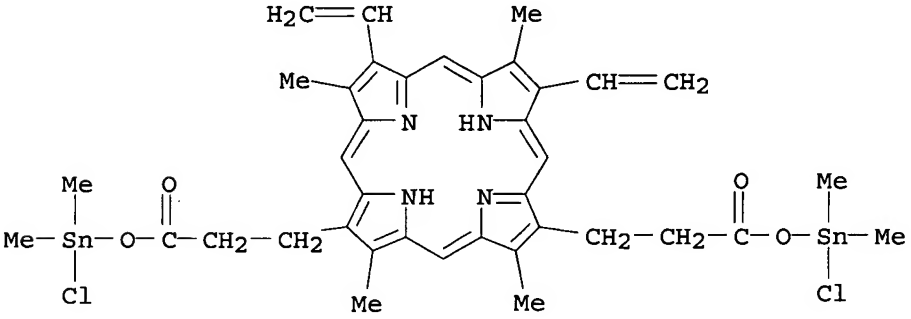
I

AB Protoporphyrin IX (H4PPIX, shown as I) **complexes** of diorganotin(IV) chloro moieties with formula (R2SnCl)2H2PPIX (R = Me, Bu and Ph) have been obtained and their solid-state and solution-phase configurations have been studied through spectroscopic investigations. Coordination of the side-chain carboxylates of H4PPIX to R2Sn(IV)Cl moieties, with bridging carboxylate (COO-) has been inferred by comparison of the free and coordinated H4PPIX IR spectra, while the occurrence of a five-coordinated tin(IV) atom in a cis-R2 trigonal bipyramidal structure has been deduced, for all of the synthesized **complexes**, by rationalization of the nuclear quadrupole splitting parameters, according to the point-charge model formalism. Finally, the solution-phase spectral features of (R2SnCl)2-H2PPIX are in agreement with the monomeric character of the protoporphyrin IX, under the exptl. conditions used.

IT **148873-23-8P 148873-24-9P 148873-25-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, IR, Moessbauer, and fluorescence emission spectra of)

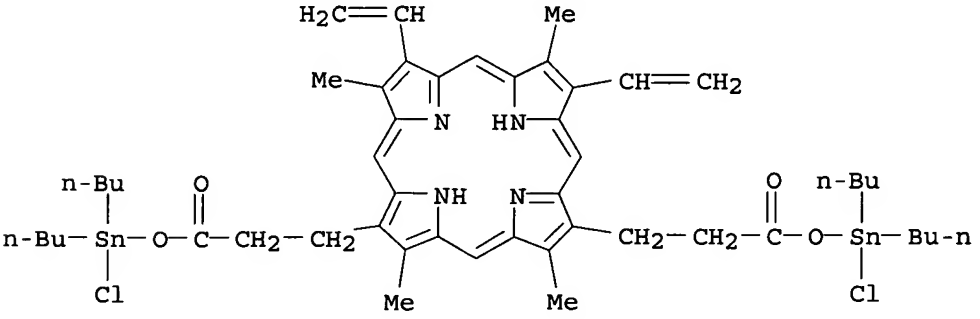
RN 148873-23-8 CAPLUS

CN 21H,23H-Porphine, 2,8-bis[3-[(chlorodimethylstannyl)oxy]-3-oxopropyl]-12,17-diethenyl-3,7,13,18-tetramethyl- (9CI) (CA INDEX NAME)

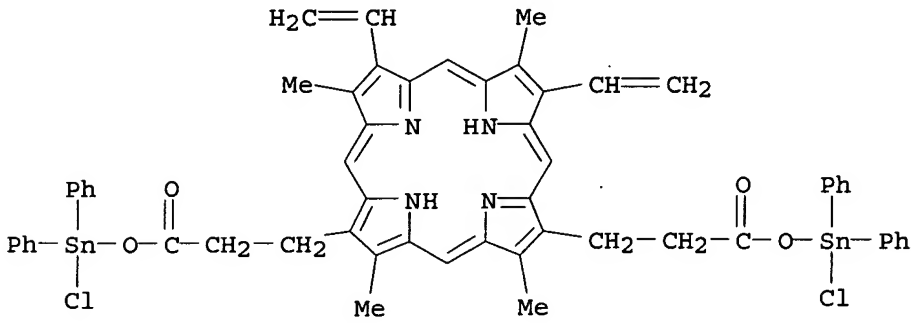


RN 148873-24-9 CAPLUS

CN 21H,23H-Porphine, 2,8-bis[3-[(dibutylchlorostannyl)oxy]-3-oxopropyl]-12,17-diethenyl-3,7,13,18-tetramethyl- (9CI) (CA INDEX NAME)



RN 148873-25-0 CAPLUS
CN 21H,23H-Porphine, 2,8-bis[3-[(chlorodiphenylstannyl)oxy]-3-oxopropyl]-12,17-diethenyl-3,7,13,18-tetramethyl- (9CI) (CA INDEX NAME)



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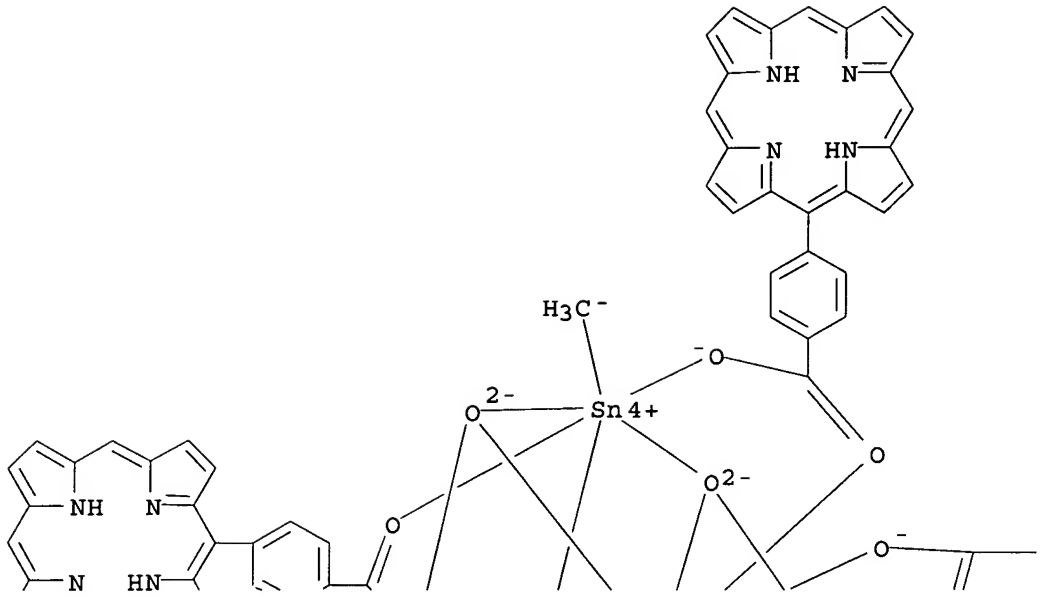
1501453 PROCESSES
3317530 PROCESS
(PROCESS OR PROCESSES)
3060318 METHOD
1256590 METHODS
3963233 METHOD
(METHOD OR METHODS)
2130178 SYNTH?
L9 10 L8 AND (PROCESS OR METHOD OR SYNTH?)

=> dis l9 1-10 bib abs hitstr

L9 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:106582 CAPLUS
DN 142:366152
TI A Lipophilic Hexaporphyrin Assembly Supported on a Stannoxane Core
AU Chandrasekhar, Vadapalli; Nagendran, Selvarajan; Azhakar, Ramachandran; Kumar, Murugaeson Ravi; Srinivasan, Alagar; Ray, Kallol; Chandrashekar, Tavarekere K.; Madhavaiah, C.; Verma, Sandeep; Priyakumar, U. Deva; Sastry, G. Narahari
CS Department of Chemistry, Indian Institute of Technology-Kanpur, Kanpur, 208016, India
SO Journal of the American Chemical Society (2005), 127(8), 2410-2411
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 142:366152
AB Lipophilic hexaporphyrin free-base [BuSn(O)O2C(H2TTP)]6 [O2C(H2TTP) = 5-(4-carboxyphenyl)-10,15,20-tritolyl-21,23H-porphyrin] and its Cu-metalated derivative supported on a stannoxane (Sn6O6) core were **synthesized** and characterized. The nuclease activity of the Cu derivative was studied by incubating supercoiled DNA. Nearly complete conversion of form I to form II was observed in 5 min. DNA cleavage did not occur in the presence of the free base hexaporphyrin alone. The Cu **complex** was inactive toward protein cleavage. Thus, the Cu **complex** can potentially be used for selective removal of nucleic acid contaminants from cell exts. The palladium(II) hexaporphyrin-stannoxane derivative was also prepared
IT **848738-14-7**
RL: PRP (Properties)
(optimized geometry from PM3 calcns.)
RN 848738-14-7 CAPLUS
CN Tin, hexamethylhexa-μ3-oxo[μ-[4-(10-phenyl-21H,23H-porphin-5-yl)benzoato-κO:κO']]pentakis[μ-[4-(21H,23H-porphin-5-yl)benzoato-κO:κO']]hexa- (9CI) (CA INDEX NAME)

PAGE 1-A

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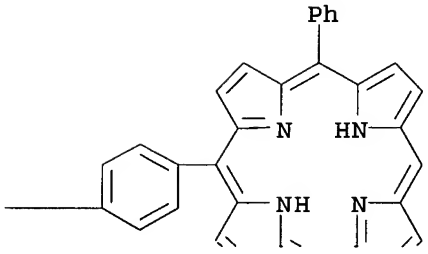

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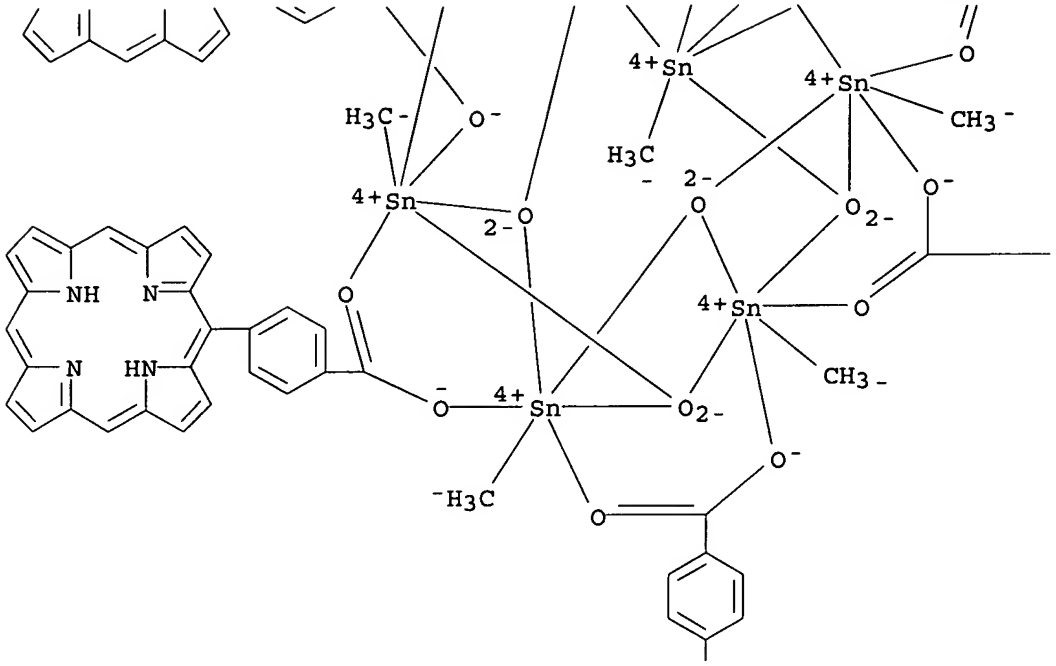

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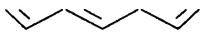

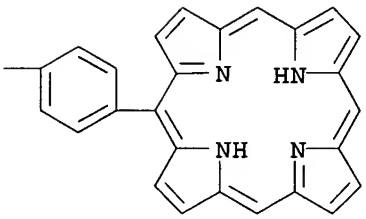

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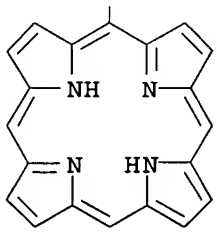
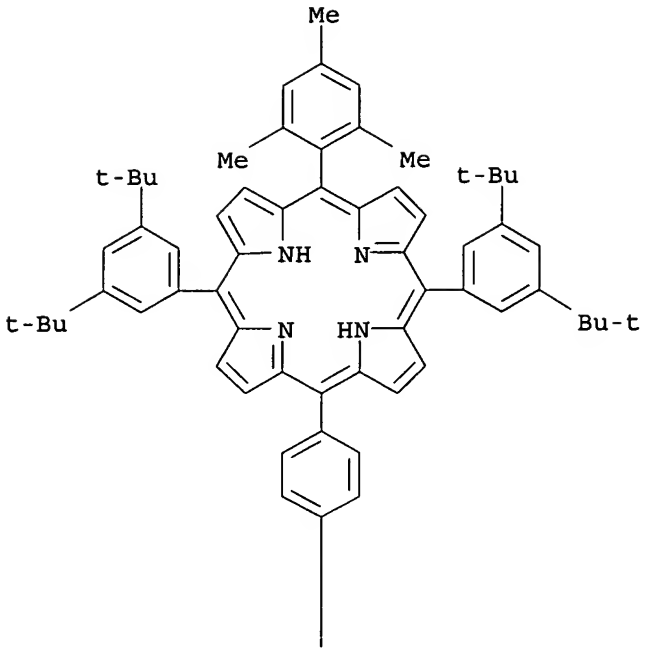


RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:45741 CAPLUS
DN 140:217731
TI A Tin-Complexation Strategy for Use with Diverse Acylation **Methods** in the Preparation of 1,9-Diacyldipyrromethanes
AU Tamaru, Shun-ichi; Yu, Lianhe; Youngblood, W. Justin; Muthukumaran, Kannan; Taniguchi, Masahiko; Lindsey, Jonathan S.

CS Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SO Journal of Organic Chemistry (2004), 69(3), 765-777
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 140:217731
AB The acylation of dipyrromethanes to form 1,9-diacyldipyrromethanes is an essential step in the rational **synthesis** of porphyrins. Although several **methods** for acylation are available, purification is difficult because 1,9-diacyldipyrromethanes typically streak extensively upon chromatog. and give amorphous powders upon attempted crystallization A solution to this problem has been achieved by reacting the 1,9-diacyldipyrromethane with Bu2SnCl2 to give the corresponding dibutyl(5,10-dihydrodipyrrinato)tin(IV) **complex**. The reaction is selective for dipyrromethanes that bear acyl groups at both the 1- and 9-positions but otherwise is quite tolerant of diverse substituents. The diacyldipyrromethane-tin **complexes** are stable to air and water, are highly soluble in common organic solvents, crystallize readily, and chromatograph without streaking. Four **methods** (Friedel-Crafts, Grignard, Vilsmeier, benzoxathiolium salt) were examined for the direct 1,9-diacylation of a dipyrromethane or the 9-acylation of a 1-acyldipyrromethane. In each case, treatment of the crude reaction mixture with Bu2SnCl2 and TEA at room temperature enabled facile isolation of multigram quantities of the 1,9-diacyldipyrromethane-tin **complex**. The diacyldipyrromethane-tin **complexes** could be decomplexed with TFA in nearly quant. yield. Alternatively, use of a diacyldipyrromethane-tin **complex** in a porphyrin-forming reaction (reduction with NaBH4, acid-catalyzed condensation with a dipyrromethane, DDQ oxidation) afforded the desired free base porphyrin in yield comparable to that obtained from the uncomplexed diacyldipyrromethane. The acylation/tin-complexation strategy has been applied to a bis(dipyrromethane) and a porphyrin-dipyrromethane. In summary, the tin-complexation strategy has broad scope, is compatible with diverse acylation **methods**, and greatly facilitates access to 1,9-diacyldipyrromethanes.
IT **666705-26-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of (methylene)bis[pyrrole]tin **complexes** and use of tin-complexation strategy for acylation of dipyrromethane derivs.)
RN 666705-26-6 CAPLUS
CN Tin, [[[[4-[10,20-bis[3,5-bis(1,1-dimethylethyl)phenyl]-15-(2,4,6-trimethylphenyl)-21H,23H-porphin-5-yl]phenyl]methylene]di(1H-pyrrole-5,2-diyl-κN)]bis[(4-methylphenyl)methanonato-κO]](2-)]-, (OC-6-22)- (9CI) (CA INDEX NAME)

PAGE 1-A

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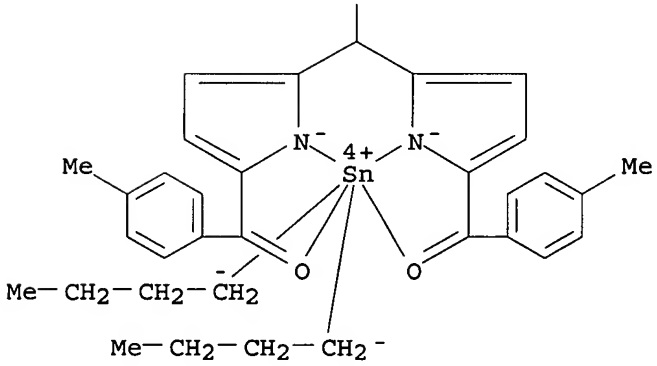



RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:924541 CAPLUS
DN 140:121530
TI **Synthesis** and characterization of carboxylate **complexes** of SnIV porphyrin monomers and oligomers
AU Hawley, Joanne C.; Bampos, Nick; Sanders, Jeremy K. M.
CS University Chemical Laboratory, University of Cambridge, Cambridge, CB2 1EW, UK
SO Chemistry--A European Journal (2003), 9(21), 5211-5222
CODEN: CEUJED; ISSN: 0947-6539
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English
OS CASREACT 140:121530
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

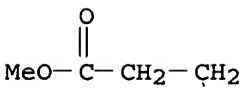
AB Most of the porphyrin-recognition chemical the authors have studied previously has centered on kinetically labile metal - ligand interactions, such as Zn-N and Ru-N. The authors' interest in the broader scope of mol. recognition required a metal with the ability to specifically recognize non-nitrogen-based ligands, with a significantly different binding interaction to distinguish it from N-based analogs. The authors describe interactions of SnIV porphyrins, for example I (M = M' = Sn(OH)2 or M = Sn(OH)2, M' = Zn and R = CH2CH2CO2Me) and Sn(TPP)(OH)2 (H2TPP = tetraphenylporphyrin) that bind O-based ligands and for which the SnIV-O bond is in slow exchange on the NMR timescale. Carboxylate **complexes** is employed to highlight the structural/geometric features of porphyrin monomers and cyclic oligomers. Where more than one porphyrin unit is present in a mol. scaffold, the authors report the effect of carboxylate binding on the **complex** when the two porphyrins contain different metals (typically SnIV and ZnII). The unexpected spectroscopic and structural properties of the Sn2(9-anthroic acid)-porphyrin dimer are also reported.

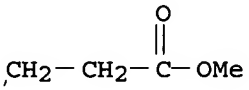
IT **645387-60-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 645387-60-6 CAPLUS

CN Tin, chlorohydroxy[octamethyl 18,24,43,49,52,58,67,73-octamethyl-60,61,62,63,75,76,79,80-octaazapentadecacyclo[39.9.9.916,26.12,6.111,15.117,20.122,25.127,31.136,40.142,45.147,50.151,54.156,59.166,69.171,74]octaconta-2,4,6(78),11,13,15(77),16,18,20,22(75),23,25,27,29,31(65),36,38,40(64),41,43,45,47(62),48,50,51,53,55,57,59,66,68,70,72,74(79)-tetratriacontaene-7,9,32,34-tetrayne-19,23,44,48,53,57,68,72-octapropanoato(2-)-κN60,κN61,κN62,κN63]-, (OC-6-23)- (9CI) (CA INDEX NAME)







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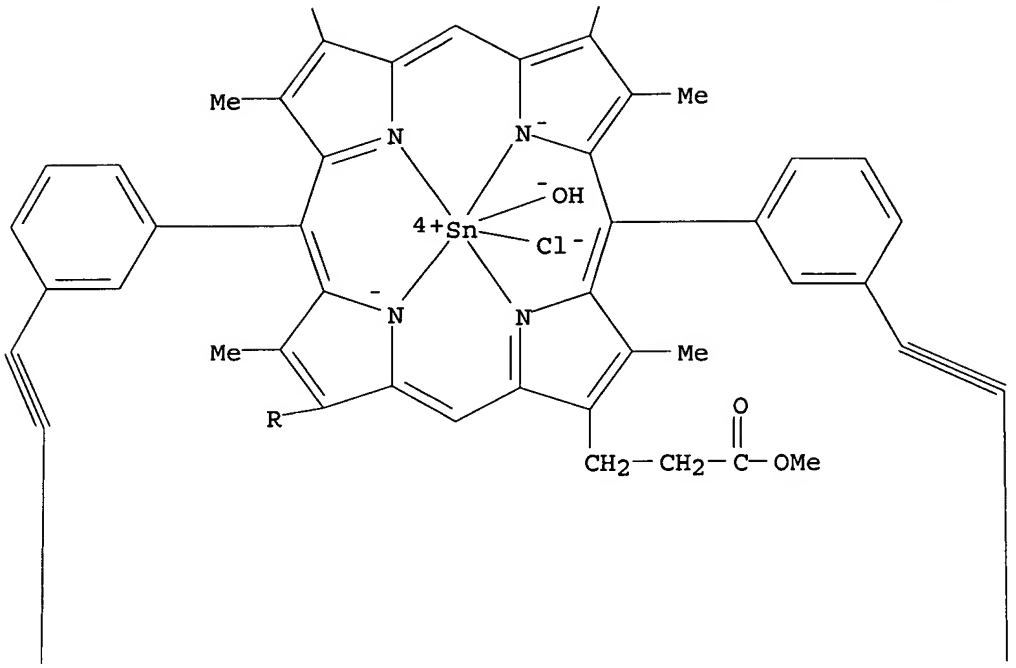


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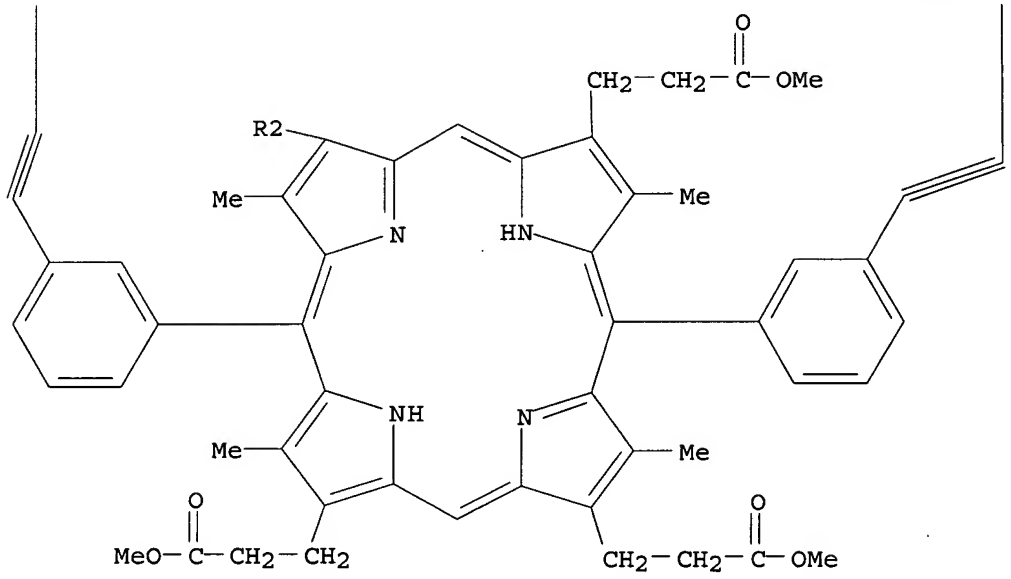


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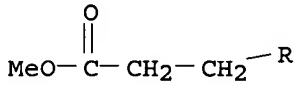
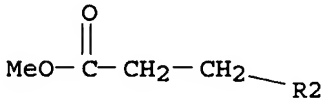
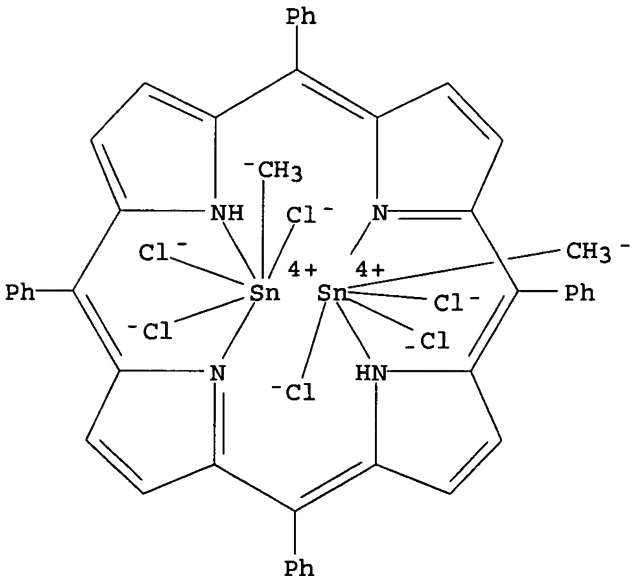


RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:139931 CAPLUS
DN 139:53094
TI **Synthesis**, characterization and spectral studies of some molecular adducts of organotin(IV) chlorides with free base meso-tetraarylporphyrins
AU Asadi, Mozaffar; Zabardasti, Abedien
CS Chemistry Department, College of Sciences, Shiraz University, Shiraz, Iran
SO Journal of Chemical Research, Synopses (2002), (12), 611-613
CODEN: JRPSDC; ISSN: 0308-2342
PB Science Reviews
DT Journal
LA English
OS CASREACT 139:53094
AB Some mol. **complexes** of diethyltin(IV) dichloride and methyltin(IV) trichloride with para-substituted meso-tetraphenylporphyrins (PP) of the general formula [{Et2SnCl2}H2T(4-X)PP] and [(MeSnCl3)2H2T(4-X)PP]; {X = OCH3, CH3, H, and Cl} were **synthesized** and characterized by 1H NMR, UV-visible, and elemental microanal. **methods**.
IT **544711-28-6P 544711-29-7P 544711-30-0P**
**544711-31-1P 544711-32-2P 544711-33-3P**
**544711-34-4P 544711-35-5P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(**synthesis**, characterization and spectral studies of some mol. adducts of organotin(IV) chlorides with free base meso-tetraarylporphyrins)
RN 544711-28-6 CAPLUS
CN Tin, hexachlorodimethyl[μ-[5,10,15,20-tetrakis(4-chlorophenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 544711-29-7 CAPLUS
CN Tin, hexachlorodimethyl[μ-(5,10,15,20-tetraphenyl-21H,23H-porphine-κN21,κN22:κN23,κN24)]di- (9CI) (CA INDEX NAME)

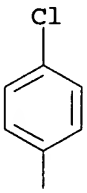



RN 544711-30-0 CAPLUS
CN Tin, hexachlorodimethyl[μ-[5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 544711-31-1 CAPLUS
CN Tin, hexachlorodimethyl[μ-[5,10,15,20-tetrakis(4-methoxyphenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 544711-32-2 CAPLUS
CN Tin, tetrachlorotetraethyl[μ-[rel-(21R,23S)-5,10,15,20-tetrakis(4-chlorophenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di-, stereoisomer (9CI) (CA INDEX NAME)

PAGE 1-A

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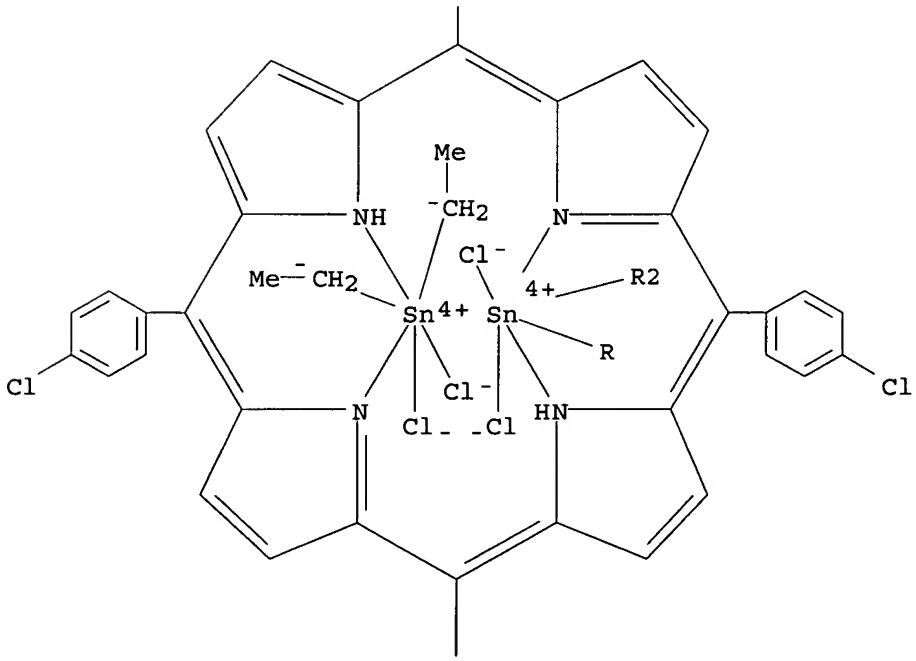
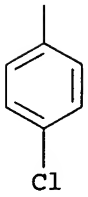
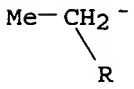
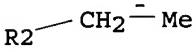




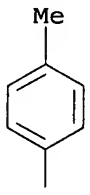




RN 544711-33-3 CAPLUS
CN Tin, tetrachlorotetraethyl[μ-[rel-(21R,23S)-5,10,15,20-tetraphenyl-21H,23H-porphine-κN21,κN22:κN23,κN24]]di-, stereoisomer (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 544711-34-4 CAPLUS
CN Tin, tetrachlorotetraethyl[μ-[rel-(21R,23S)-5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di-, stereoisomer (9CI) (CA INDEX NAME)





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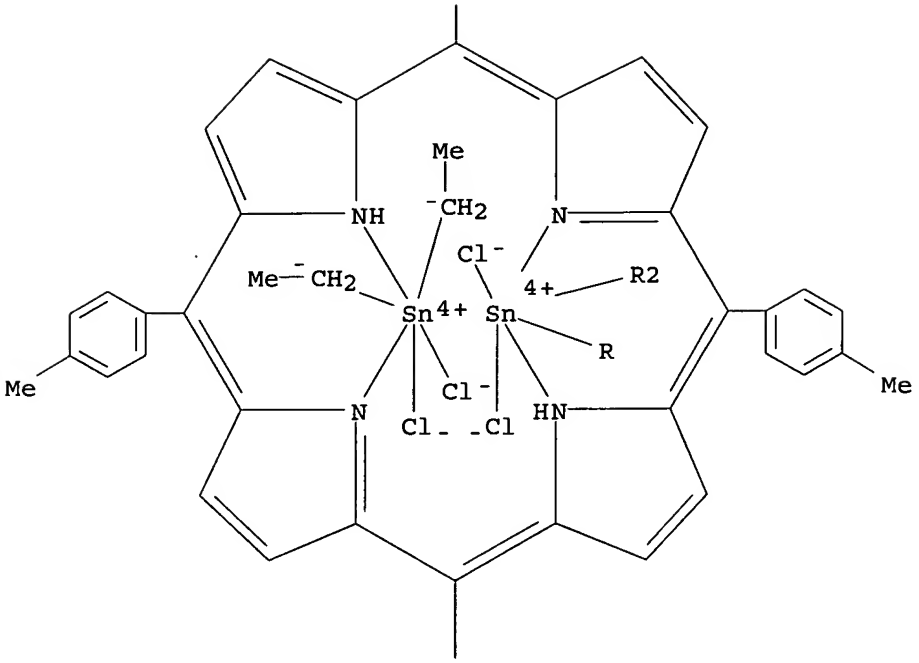


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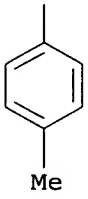
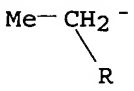
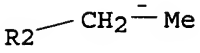
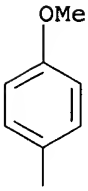


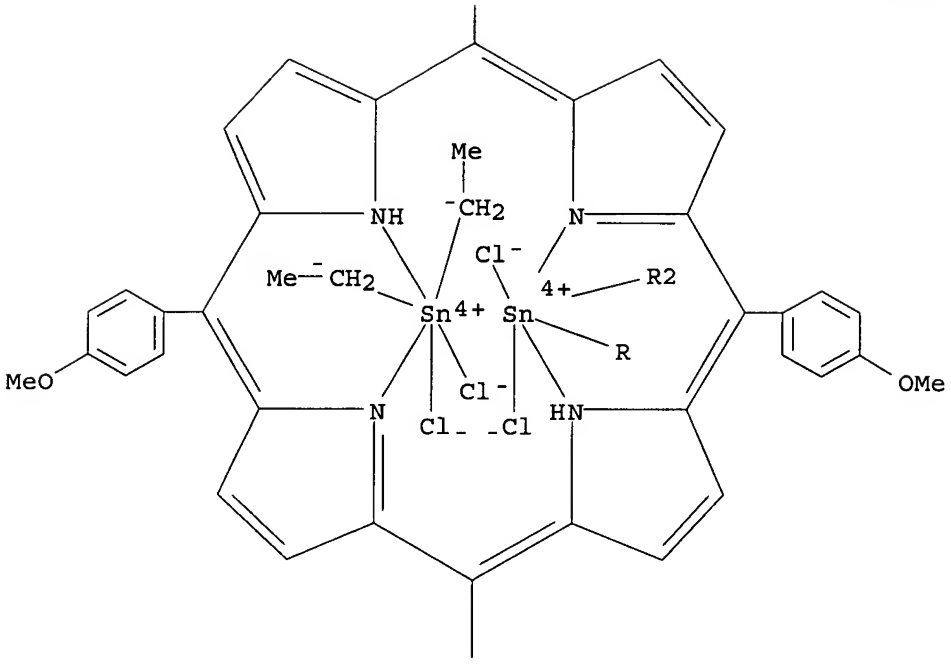




RN 544711-35-5 CAPLUS
CN Tin, tetrachlorotetraethyl[μ-[rel-(21R,23S)-5,10,15,20-tetrakis(4-methoxyphenyl)-21H,23H-porphine-κN21,κN22:κN23,κN24]]di-, stereoisomer (9CI) (CA INDEX NAME)


OMe

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Cl-
Me—CH2
4+
R2
Sn4+
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MeO
OMe
Cl-
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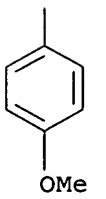
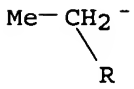
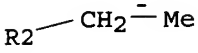
HN
Cl- -Cl




RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

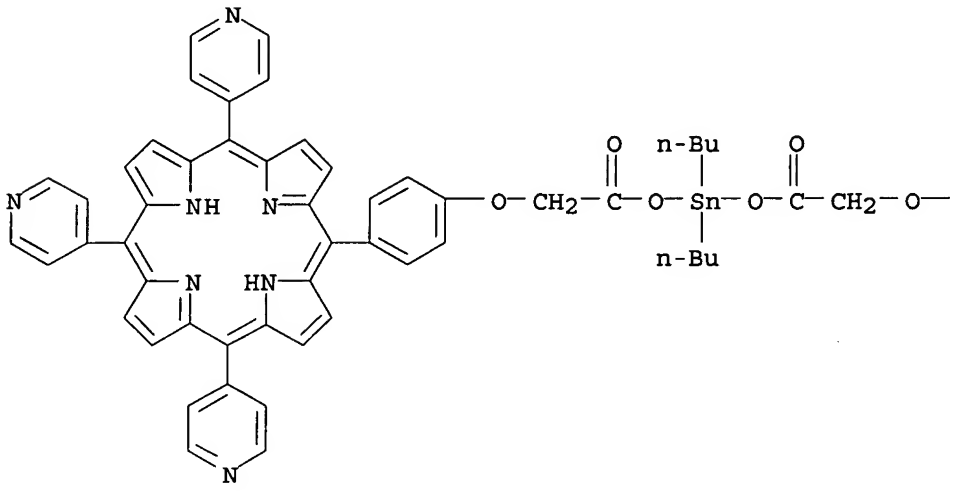
L9 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:529524 CAPLUS
DN 138:180192
TI **Synthesis** and characterization of water-insoluble and water-soluble dibutyltin(IV) porphinate **complexes** based on the tris(pyridinyl)porphyrin moiety, their anti-tumor activity in vitro and interaction with DNA
AU Han, Gaoyi; Yang, Pin
CS Shanxi University, Institute of Molecular Science, Taiyuan, 030006, Peop. Rep. China
SO Journal of Inorganic Biochemistry (2002), 91(1), 230-236
CODEN: JIBIDJ; ISSN: 0162-0134
PB Elsevier Science Inc.
DT Journal
LA English
OS CASREACT 138:180192
AB The water-insol. and water-soluble organotin(IV)porphinate **complexes** based on the tris-(4-pyridinyl)porphyrin and tris(N-methyl-4-pyridiniumyl)porphyrin moieties were **synthesized** and characterized by elemental anal., 1H NMR, IR and electrospray ionization mass spectra. The in vitro activity of the compds. against P388 leukemia and A-549 was determined The results show that the anti-tumor activities of organotin(IV)porphinate is related to the water solubility of the compds. and the central ion in the porphyrin ring. The interaction between the water-soluble dibutyltin(IV) porphinate **complexes** and DNA has been investigated. The result shows that compds. cause DNA hypochromism measured by A260, a slight increase in the viscosity of the DNA, and an increase in the m.p. of DNA by 2.9 and 1.6°, resp. at DNAbase/DrugPor ratios of 60. The binding consts. to DNA were 1.35±0.16+107 M-1 and 1.45±0.12+106 M-1 determined using EB competition **method** based on the porphyrin concentration, which is 20 and five times greater than that of precursor porphyrins [5-p,o-(carboxy)methoxyphenyl-10,15,20-tris(N-methyl-4-pyridiniumyl)] porphyrin (p,o-tMPyPac) to DNA. Electrophoresis test shows that the compds. cannot cleave the DNA. According to the electrophoresis test result and all the above results, the cytotoxic activity against P388 and A-549 tumor cells appears not to come from the cleavage of DNA caused by the compds. but from the high affinity of compds. to DNA.
IT **498547-35-6P 498547-36-7P 498547-37-8P**
**498547-38-9P**
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**synthesis** and characterization of water-insol. and water-soluble dibutyltin(IV) porphinate **complexes** based on tris(pyridinyl)porphyrin moiety, their antitumor activity in vitro and

interaction with DNA)

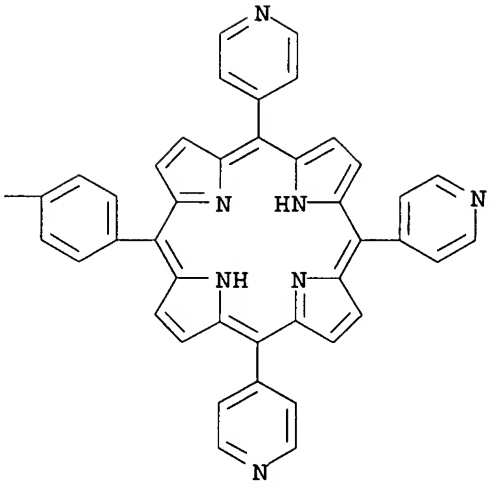
RN 498547-35-6 CAPLUS

CN 21H,23H-Porphine, 5,5'-[(dibutylstannylene)bis[oxy(2-oxo-2,1-ethanediyl)oxy-4,1-phenylene]]bis[10,15,20-tri-4-pyridinyl- (9CI) (CA INDEX NAME)

PAGE 1-A



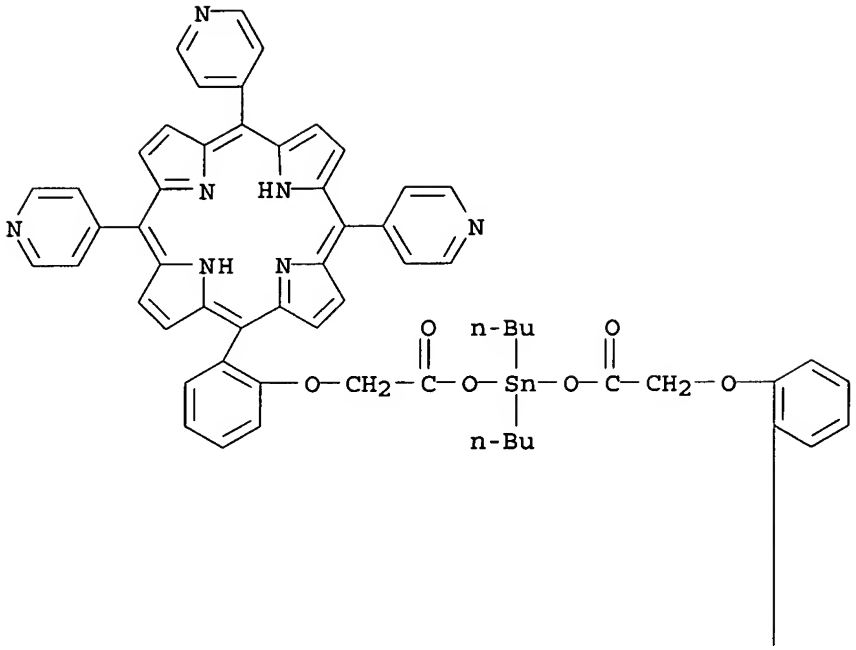
PAGE 1-B



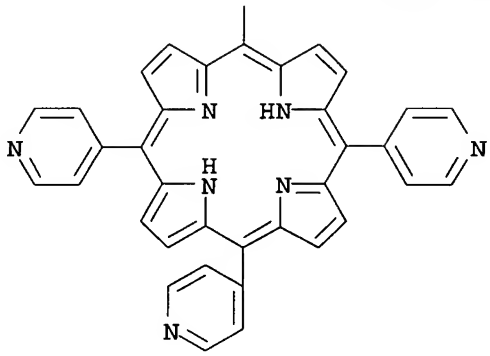
RN 498547-36-7 CAPLUS

CN 21H,23H-Porphine, 5,5'-[(dibutylstannylene)bis[oxy(2-oxo-2,1-ethanediyl)oxy-2,1-phenylene]]bis[10,15,20-tri-4-pyridinyl- (9CI) (CA INDEX NAME)

PAGE 1-A



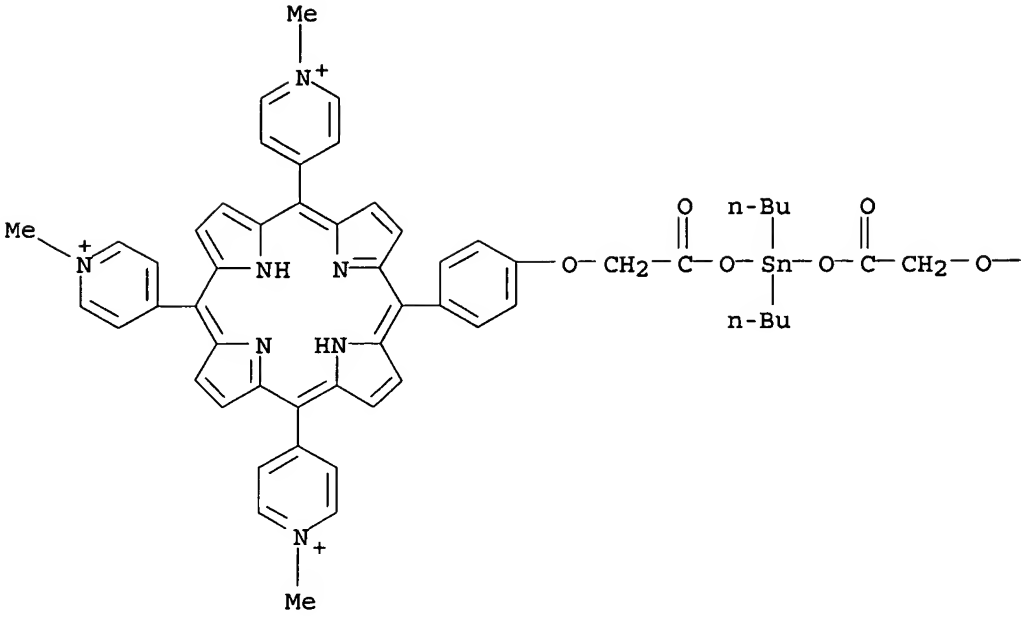
PAGE 2-A



RN 498547-37-8 CAPLUS

CN Pyridinium, 4,4',4'',4''',4'''',4'''''-[(dibutylstannylene)bis[oxy(2-oxo-2,1-ethanediyl)oxy-4,1-phenylene-21H,23H-porphine-20,5,10,15-tetrayl]]hexakis[1-methyl-, hexaiodide (9CI) (CA INDEX NAME)

PAGE 1-A



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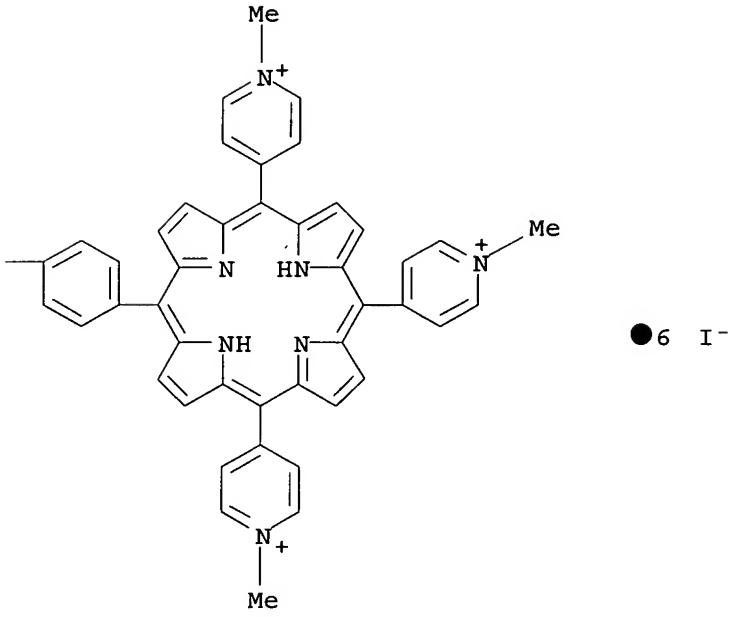
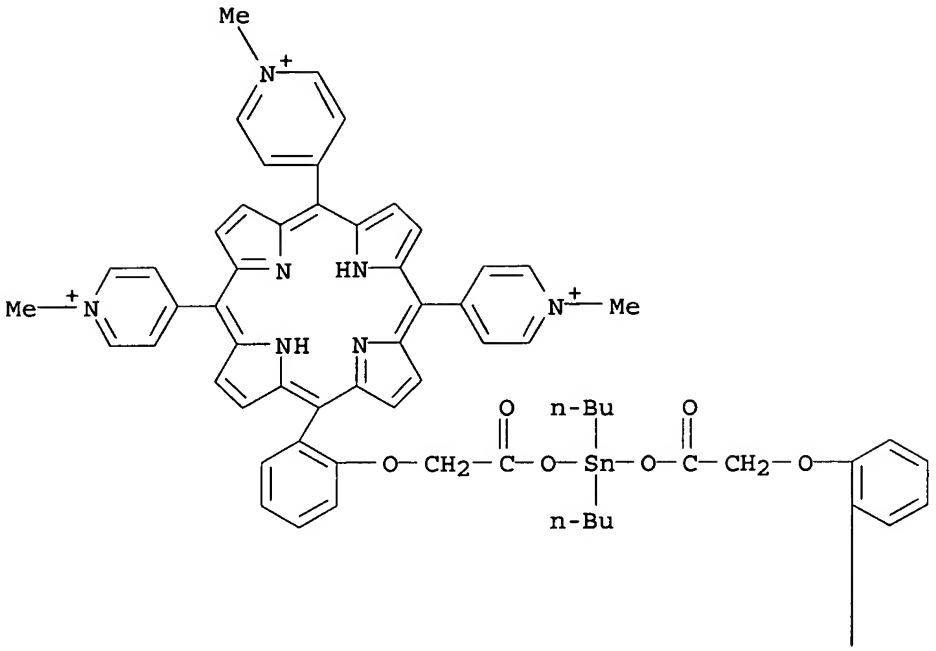


RN 498547-38-9 CAPLUS

CN Pyridinium, 4,4',4'',4''',4'''',4'''''-[(dibutylstannylene)bis[oxy(2-oxo-2,1-ethanediyl)oxy-2,1-phenylene-21H,23H-porphine-20,5,10,15-tetrayl]]hexakis[1-methyl-, hexaiodide (9CI) (CA INDEX NAME)

PAGE 1-A



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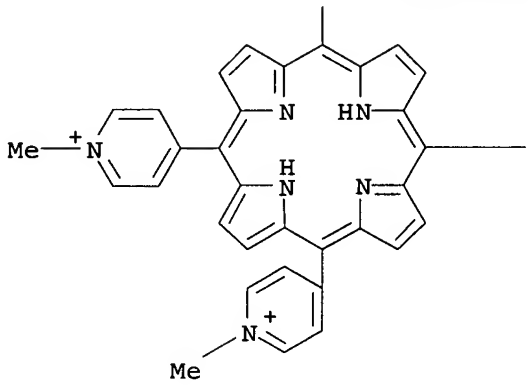
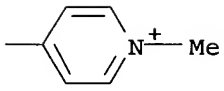


●6 $I^-$

PAGE 2-B

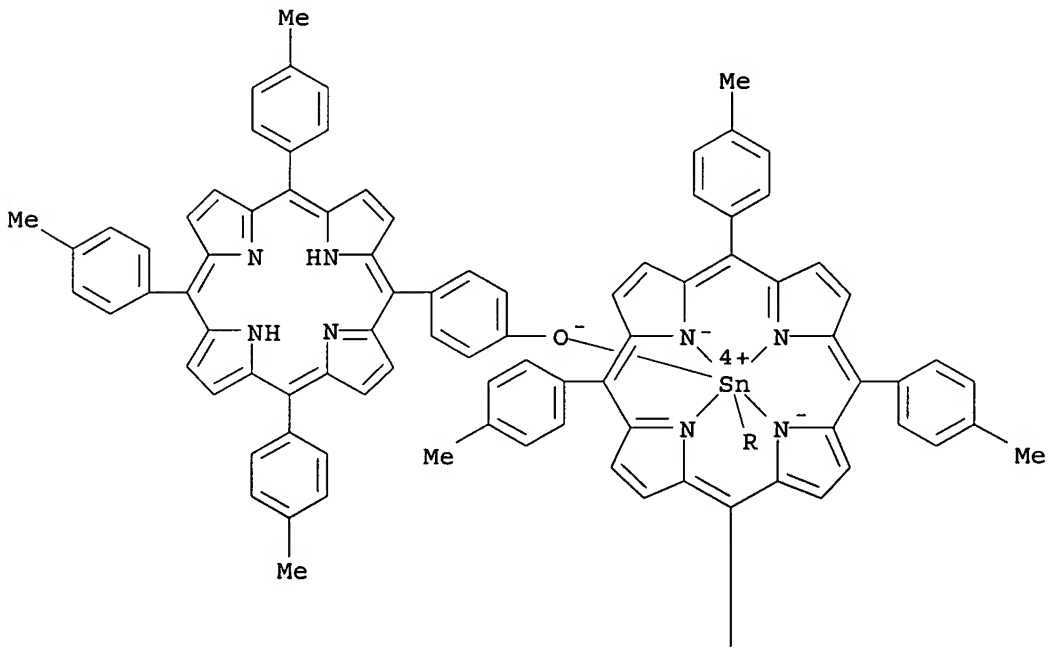


RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:823629 CAPLUS
DN 136:128085
TI New Molecular Arrays Based on a Tin(IV) Porphyrin Scaffold

AU Kumar, A. Ashok; Giribabu, L.; Reddy, D. Raghunath; Maiya, Bhaskar G.
CS School of Chemistry, University of Hyderabad, Hyderabad, 500046, India
SO Inorganic Chemistry (2001), 40(26), 6757-6766
CODEN: INOCAJ; ISSN: 0020-1669
PB American Chemical Society
DT Journal
LA English
OS CASREACT 136:128085
AB Two new porphyrin arrays, a hexamer and a nonamer, were **synthesized** and characterized by elemental anal. as well as mass, 1H NMR, and UV-visible spectroscopic **methods**. The scheme of construction of these arrays employs a **synthetic** protocol involving sequential organic and inorg. reactions conducted, resp., at the peripheral meso-Ph ring and the central tin(IV) ion of the porphyrin scaffold. The architecture of the hexamer is such that it is based on a covalently linked tin(IV) porphyrin dimer, with each of the two tin(IV) centers trans-axially ligated to two free-base porphyrins, while the higher homolog features a tin(IV) porphyrin trimer as the basal unit, with its central metalloid ions having two free-base porphyrins as axial ligands. This extended, axial-bonding-type architecture of the new arrays was studied by the 1H NMR **method**, which reveals characteristic ring-current-induced shifts and coupling patterns for the resonances due to protons of the axial free-base porphyrin subunits. The presence of any ring-ring (basal-basal, basal-axial, or axial-axial) interaction in these arrays is not obvious from their UV-visible and redox potential data, which are close to those of the corresponding constituent monomeric species. However, their singlet-state activities are quite different from those of the precursor reference compds. as probed by steady-state fluorescence. The results of the detailed studies carried out on these hybrid, bichromophoric arrays were interpreted in terms of the occurrence of intra-array, inter-chromophore energy- and electron-transfer reactions.
IT **250219-89-7**
RL: PRP (Properties)
(fluorescence)
RN 250219-89-7 CAPLUS
CN Tin, [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A



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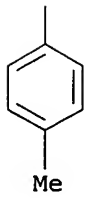
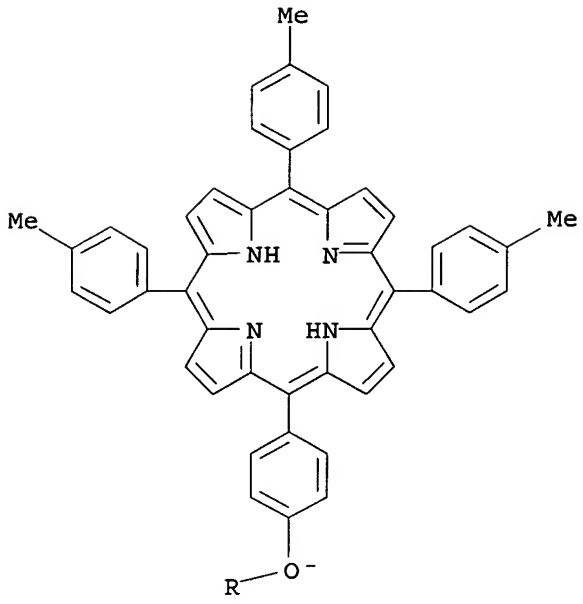



PAGE 3-A




RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:473256 CAPLUS
DN 135:257299
TI Computational study of dimethyl- and trimethyl-tin(IV) **complexes** of porphyrin derivatives
AU Duca, Dario; Barone, Giampaolo; La Manna, Gianfranco; Fiore, Tiziana; Pellerito, Claudia; Di Stefano, Roberta; Scopelliti, Michelangelo; Pellerito, Lorenzo
CS Dipartimento di Scienze Farmaceutiche, Universita degli Studi di Salerno, Fisciano, 84084, Italy
SO Applied Organometallic Chemistry (2001), 15(7), 581-592
CODEN: AOCHEX; ISSN: 0268-2605
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB The mol. geometry, energetics and electronic charge distribution of diorgano- and triorgano-tin(IV) **complexes** of [protoporphyrin-IX] and [meso-tetra(4-carboxyphenyl)porphine] derivs. were determined at semi-empirical and ab initio levels. To study the mol. details of the **complexes**, simpler mol. models were calculated by the ab initio pseudo-potential **method**. The mol. properties of these **complexes** are essentially independent of the presence of the peripheral tin atoms. Agreement was always found among the results of the different computational approaches, as well as between the theor. and the exptl. findings on the mol. geometry of the hypothesized **complexes**. Interaction modes between water and the organo-tin systems considered

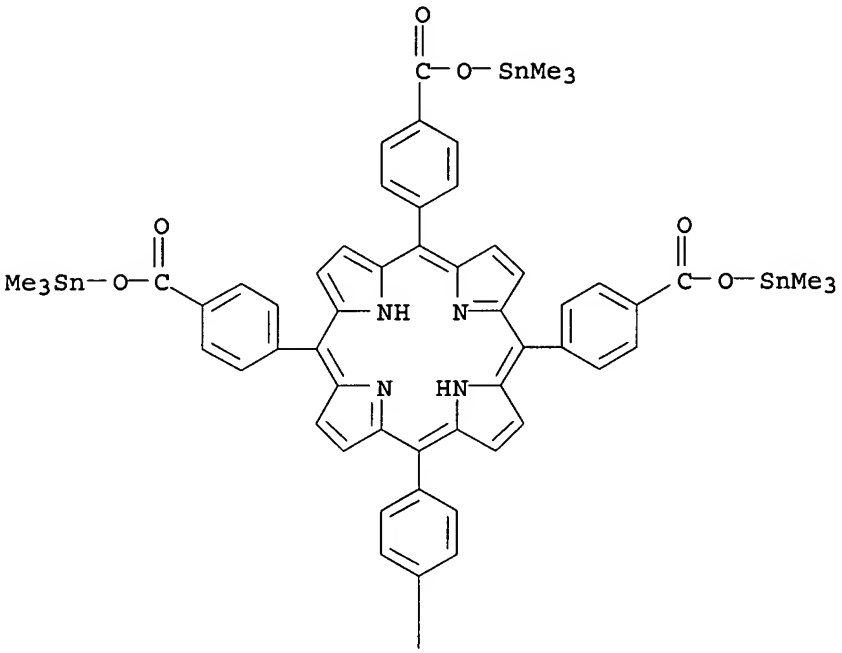
were affected strongly by the presence of peripheral tin atoms.

IT **193556-04-6 359796-84-2 359796-86-4**
**359796-87-5**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(computational study of dimethyl- and trimethyl-tin **complexes** of porphyrin derivs.)

RN 193556-04-6 CAPLUS

CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(trimethylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

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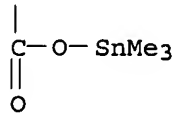
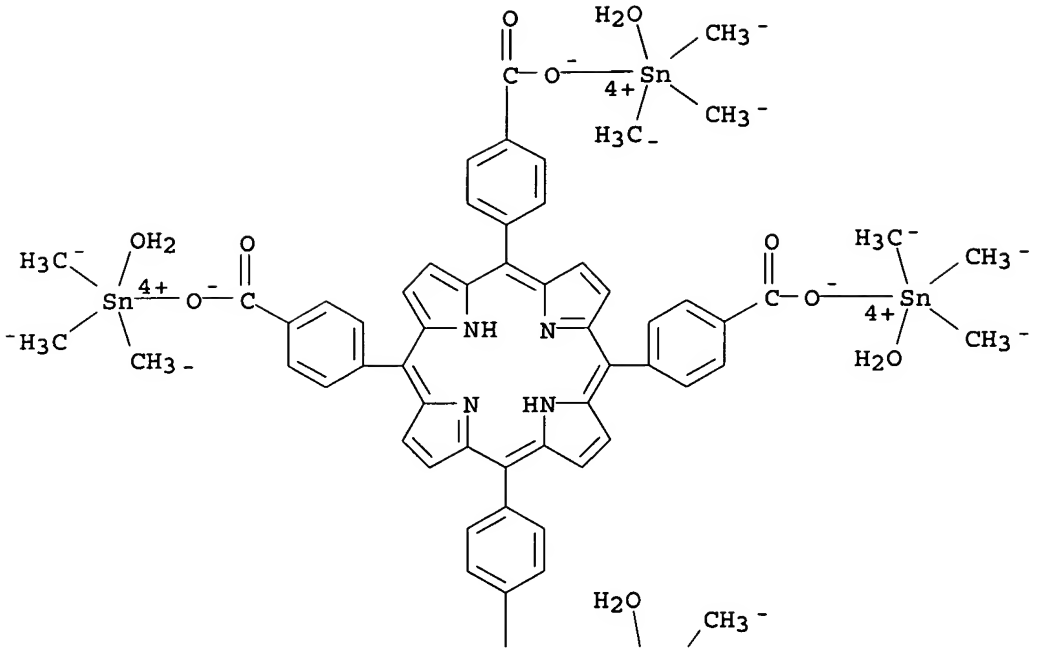



RN 359796-84-2 CAPLUS

CN Tin, tetraaquadodecamethyl[μ4-[[4,4',4'',4'''-(21H,23H-porphine-5,10,15,20-tetrayl)tetrakis[benzoato-κO]](4-)]]tetra-, stereoisomer (9CI) (CA INDEX NAME)

PAGE 1-A



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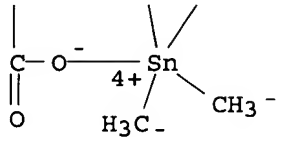
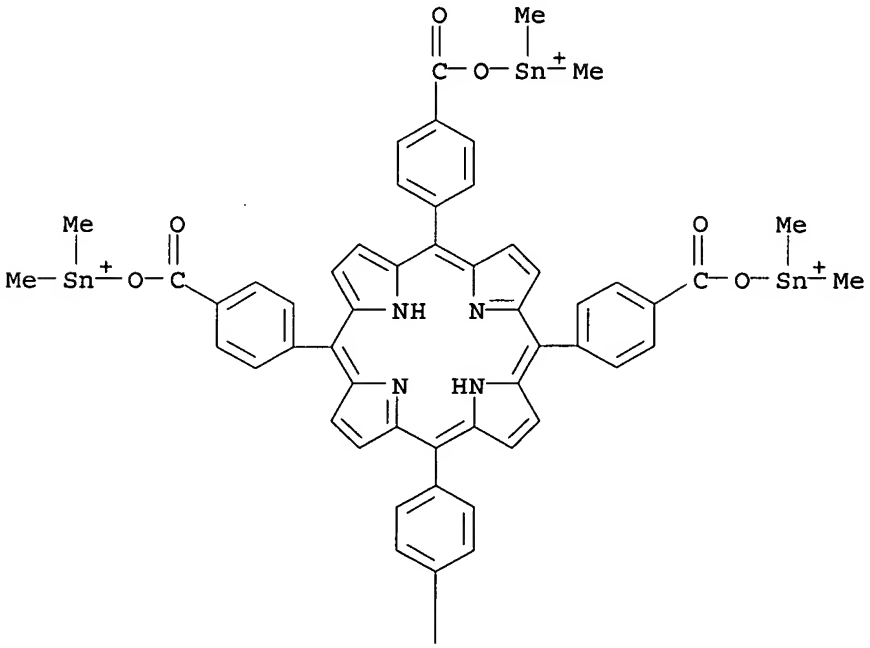


RN 359796-86-4 CAPLUS
CN Stannylium, [21H,23H-porphine-5,10,15,20-tetrayltetrakis(4,1-phenylenecarbonyloxy)]bis[dimethyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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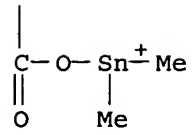
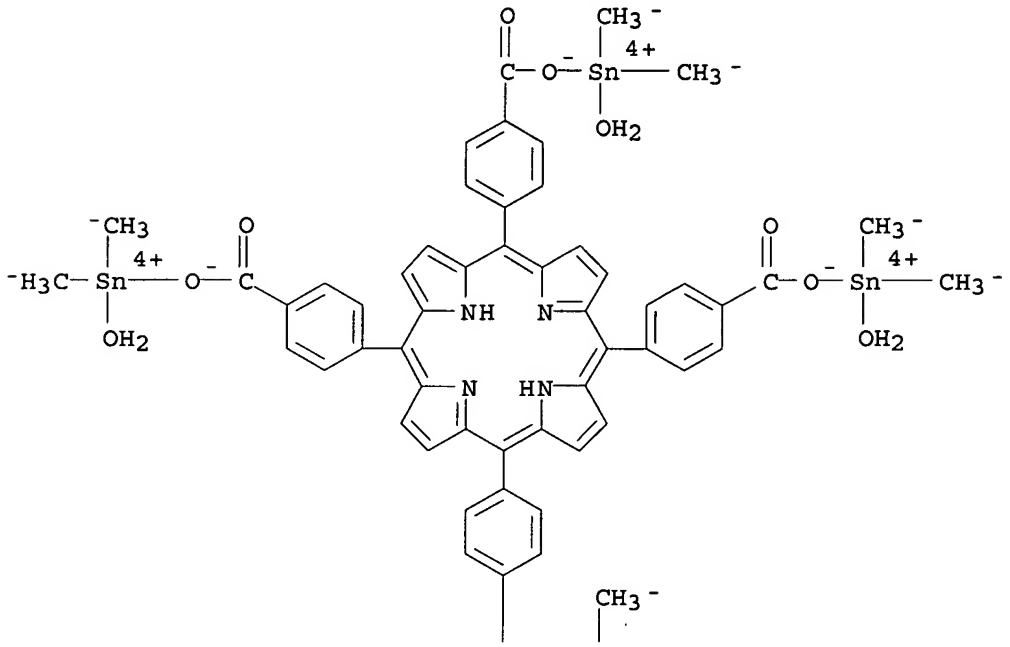


RN 359796-87-5 CAPLUS
CN Tin(4+), tetraaquaoctamethyl[μ4-[[4,4',4'',4'''-(21H,23H-porphine-5,10,15,20-tetrayl)tetrakis[benzoato-κO]](4-)]]tetra- (9CI) (CA INDEX NAME)

PAGE 1-A



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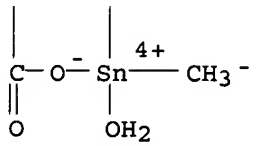


RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:649500 CAPLUS
DN 131:345713
TI "Axial-Bonding"-Type Hybrid Porphyrin Arrays: **Synthesis**, Spectroscopy, Electrochemistry, and Singlet State Properties
AU Giribabu, L.; Rao, T. Anita; Maiya, Bhaskar G.
CS School of Chemistry, University of Hyderabad, Hyderabad, 500 046, India
SO Inorganic Chemistry (1999), 38(22), 4971-4980
CODEN: INOCAJ; ISSN: 0020-1669
PB American Chemical Society
DT Journal

LA English

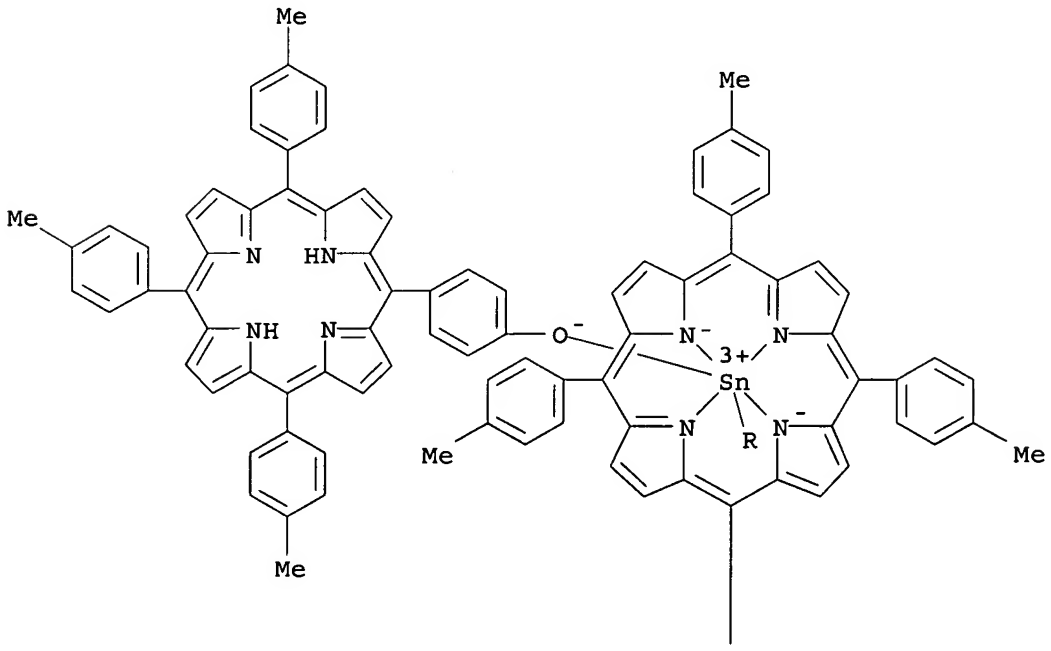
AB P(V), Ge(IV), and Sn(IV) porphyrin-based, axial-bonding-type hybrid trimers were readily constructed by employing a new building-block approach. The approach is modular in nature, and it involves simple inorg. reactions such as axial bond formation of main group element containing porphyrins and insertion of metal/metalloid ions into the porphyrin cavity. The architecture of these arrays is such that, while a P(V), Ge(IV), or Sn(IV) **complex** of meso-5,10,15,20-(tetratolyl)porphyrin forms the basal scaffolding unit, the free-base, vanadyl, Co(II), Ni(II), Cu(II), or Zn(II) porphyrins occupy the two axial sites via an aryloxy bridge. **Synthesis** of an all-P array containing three P(V) subunits also was accomplished. Each new porphyrin array studied was fully characterized by various phys. **methods** that include mass (FAB), UV-visible, IR, fluorescence, ESR, and 1H and 31P NMR (NMR; 1-dimensional and 2D) spectroscopies and cyclic voltammetry. The UV-visible and ESR spectral parameters and also the redox potential data suggest that there exists no interaction between the π-planes of the constituent monomeric porphyrins in these arrays. Detailed 1H NMR studies carried out with the trimers containing diamagnetic porphyrins reveal characteristic shielding/deshielding effects for the various protons on the axial porphyrin subunits. The ground state data, as probed by the spectroscopic and electrochem. techniques, collectively indicate that there exists a sym. but nonparallel disposition of the two axial porphyrins with respect to plane of the central porphyrin. Singlet state activity of the photoactive trimers was probed by the steady state fluorescence **method** with selective excitation into the bands corresponding to the two constituent monomeric species. Anal. of the fluorescence emission and excitation spectral data suggests the occurrence of electronic energy transfer as well as photoinduced electron transfer reactions in trimers endowed with free-base or Zn(II) porphyrin axial subunits. Efficiencies of the excited state **processes** of these trimeric arrays are dependent on the type of metal/metalloid ions present in the porphyrin crevice.

IT **250220-04-3 250220-05-4 250220-77-0**
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(elec. potential of couple containing)

RN 250220-04-3 CAPLUS

CN Stannate(1-), [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A



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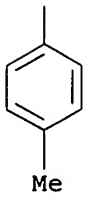
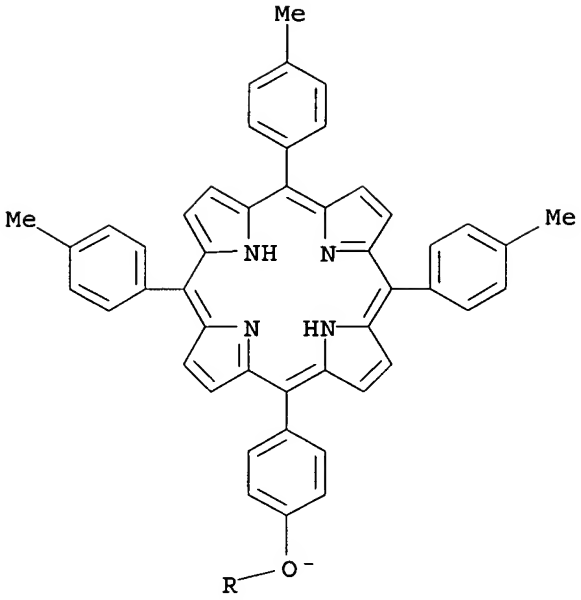
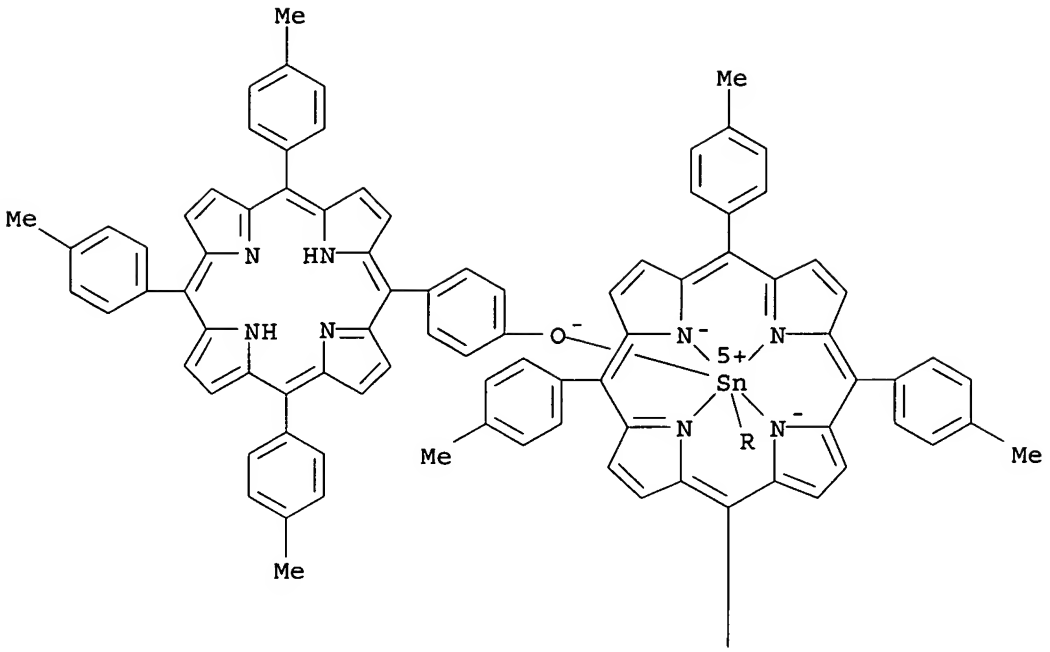



PAGE 3-A




RN 250220-05-4 CAPLUS
CN Tin(1+), [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A

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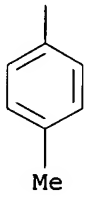


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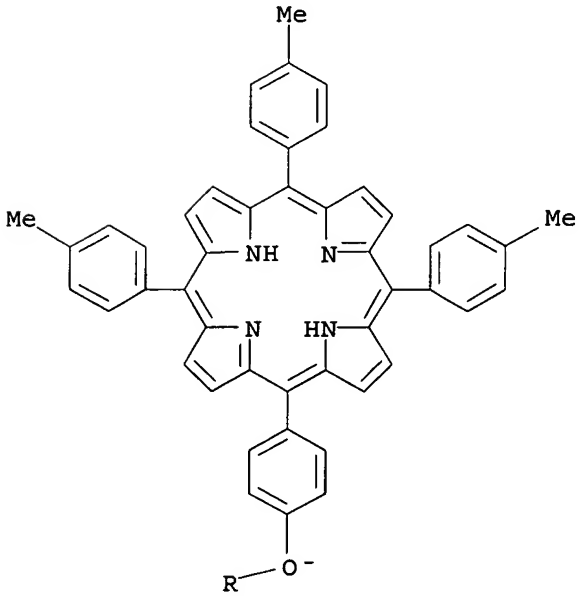
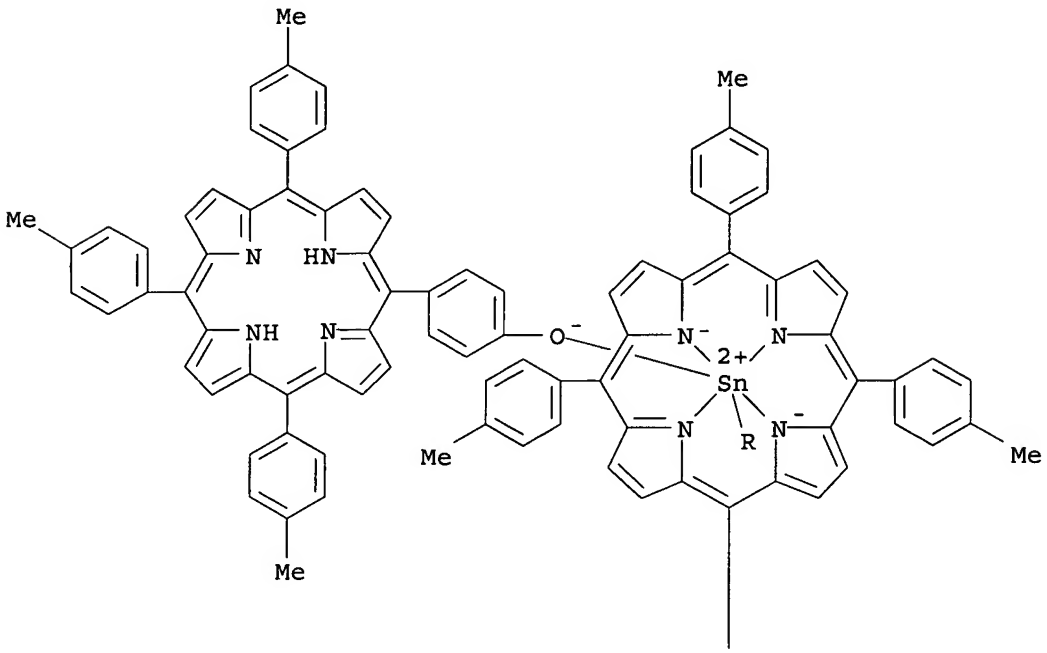


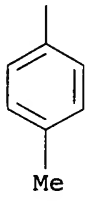

RN 250220-77-0 CAPLUS

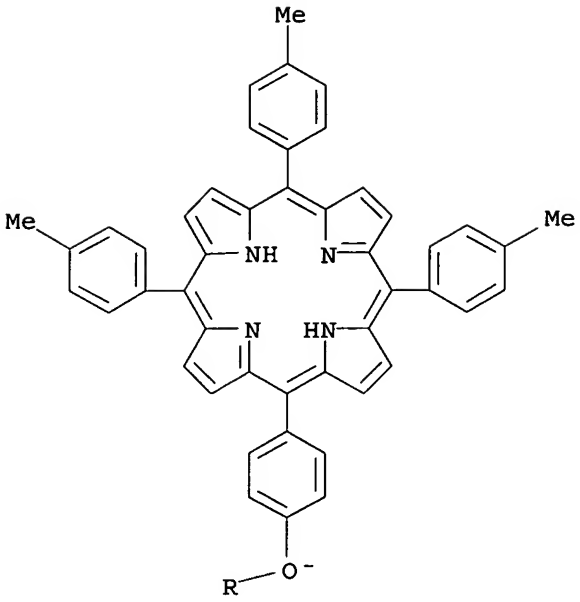
CN Stannate(2-), [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A




PAGE 2-A



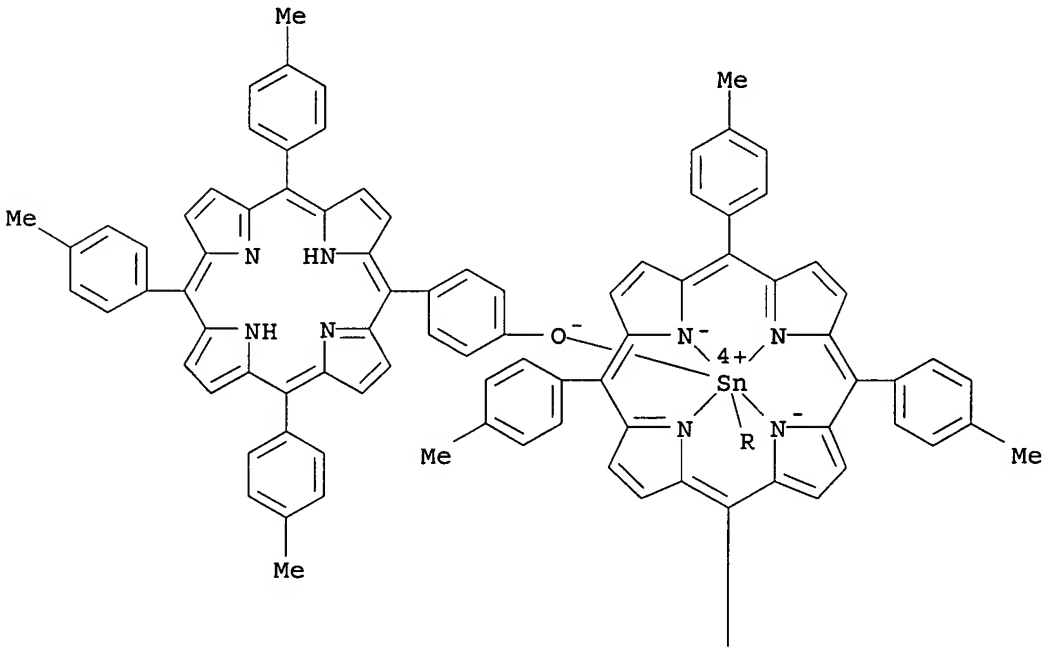



IT **250219-89-7P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and NMR and cyclic voltammetry and fluorescence)

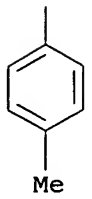
RN 250219-89-7 CAPLUS

CN Tin, [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)





PAGE 2-A

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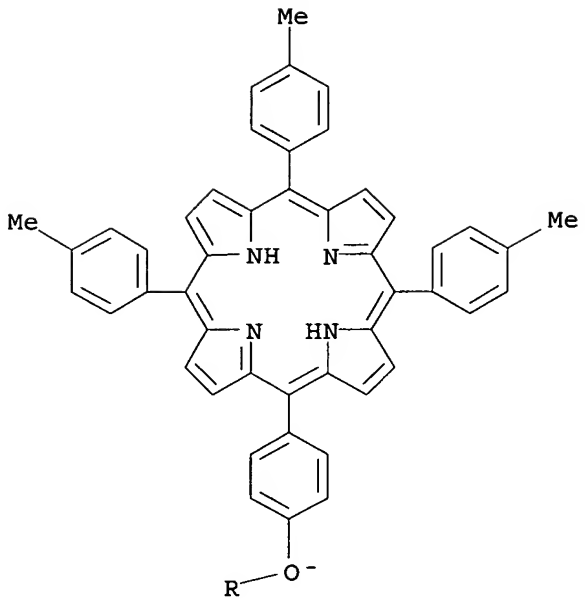



RE.CNT 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

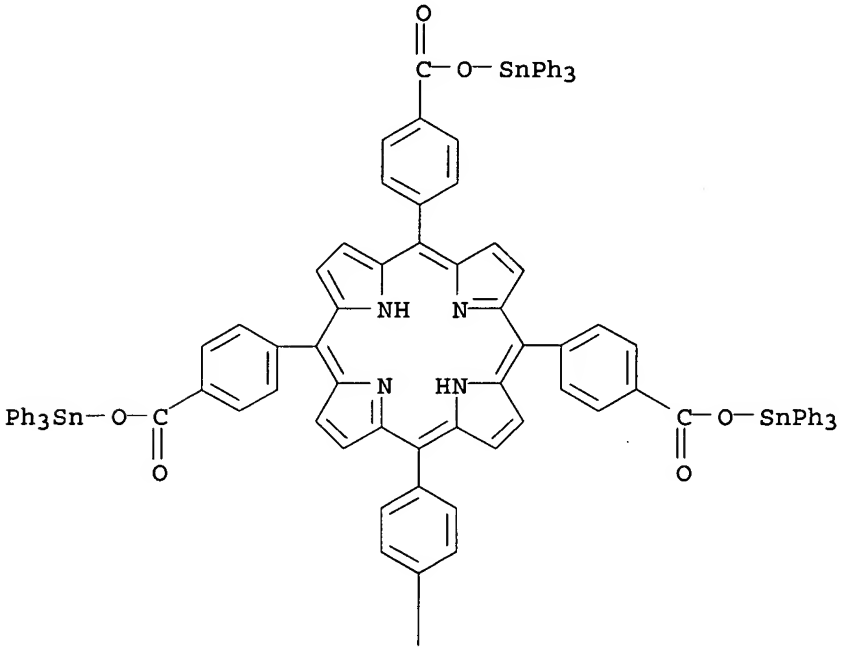
L9 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:431711 CAPLUS
DN 127:161912
TI Organometallic **complexes** with biological molecules. VII. Dialkyl- and trialkyl-tin(IV)[meso-tetra(4-carboxyphenyl)porphinate] derivatives: solid-state, solution-phase structural aspects and in vivo effects
AU Mirisola, M. G.; Pellerito, A.; Fiore, T.; Stocco, G. C.; Pellerito, L.; Cestelli, A.; Di Liegro, I.
CS Dipartimento di Chimica Inorganica, Universita di Palermo, Palermo, 90123, Italy
SO Applied Organometallic Chemistry (1997), 11(6), 499-511
CODEN: AOCHEX; ISSN: 0268-2605
PB Wiley
DT Journal
LA English
AB The **synthesis**, the structural features and the in vivo biol. activity of diorganotin(IV) and triorganotin(IV) derivs. of [meso-tetra(4-carboxyphenyl)porphine] (H4TPPC) are reported. (R2Sn)2TPPC and (R3Sn)4TPPC (R = Me, Bu, and Ph) were obtained, and the main information extracted from the IR and Moessbauer spectral data, in the solid state, was in favor of the occurrence of five-coordinated Sn(IV) atoms, in a polymeric trigonal-bipyramidal configuration, attained through two differently coordinated, ester-type and chelating, resp., carboxylate anions in [R2Sn]2TPPC, while in [Alk3Sn]4TPPC five-coordination of the Sn(IV) atom is reached through bridging carboxylate groups. 1H and 13C NMR spectra, in DMSO-d6 or CDCl3 suggested that the soluble derivs., at room temperature or at 342 K, were present in solution as simple monomers. The

interactions of (trimethyltin)4[meso-tetra(4-carboxyphenyl)porphinate] (TMTPPC) and (tributyltin)4[meso-tetra(4-carboxyphenyl)porphinate] (TBTPPC) with Bluescript KS(+) plasmid and cultured 3T3 fibroblasts were studied. Both compds. have a clear inhibitory effect on the growth of cultured mouse embryonal fibroblasts (NIH-3T3), TBTPPC being much more active. No evidence was found, however, for DNA cleavage by the compds. at molar ratios ≤1:10 (TMTPPC, TBTPPC/DNA base pairs). According to the authors' observations, the cytotoxicity of TBTPPC and TMTPPC does not seem to be based on direct interaction with DNA.

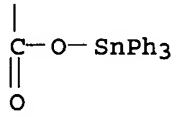
IT **193556-08-0P 193701-90-5P 193701-91-6P 193701-92-7P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and solid-state and solution-phase structural aspects of)

RN 193556-08-0 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(triphenylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

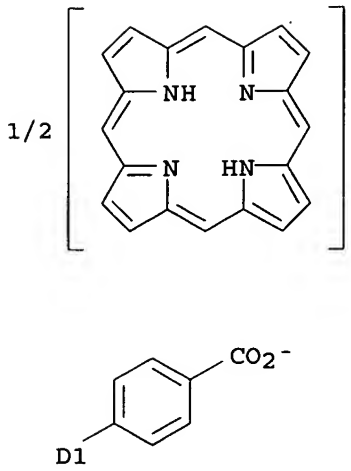



PAGE 2-A




RN 193701-90-5 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dimethyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A

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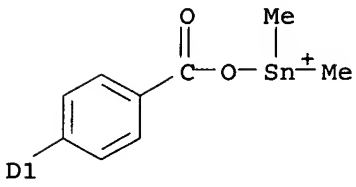
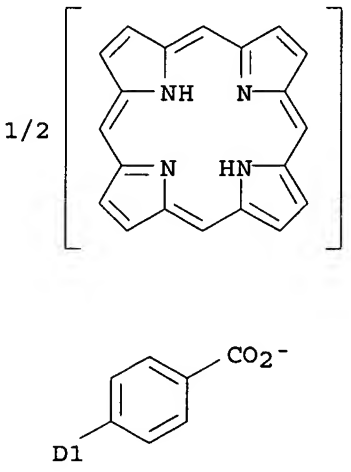



RN 193701-91-6 CAPLUS

CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[dibutyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A



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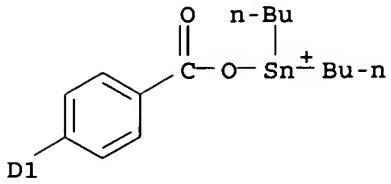
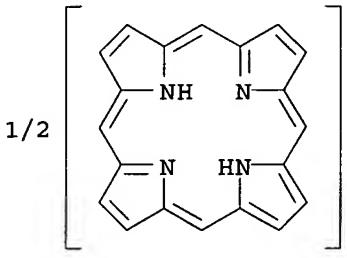
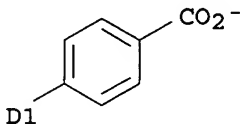


RN 193701-92-7 CAPLUS
CN Stannylium, [[15,20(or 10,20)-bis(4-carboxyphenyl)-21H,23H-porphine-5,10(or 5,15)-diyl]bis(4,1-phenylenecarbonyloxy)]bis[diphenyl-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A





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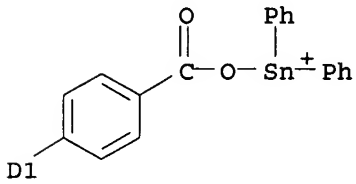
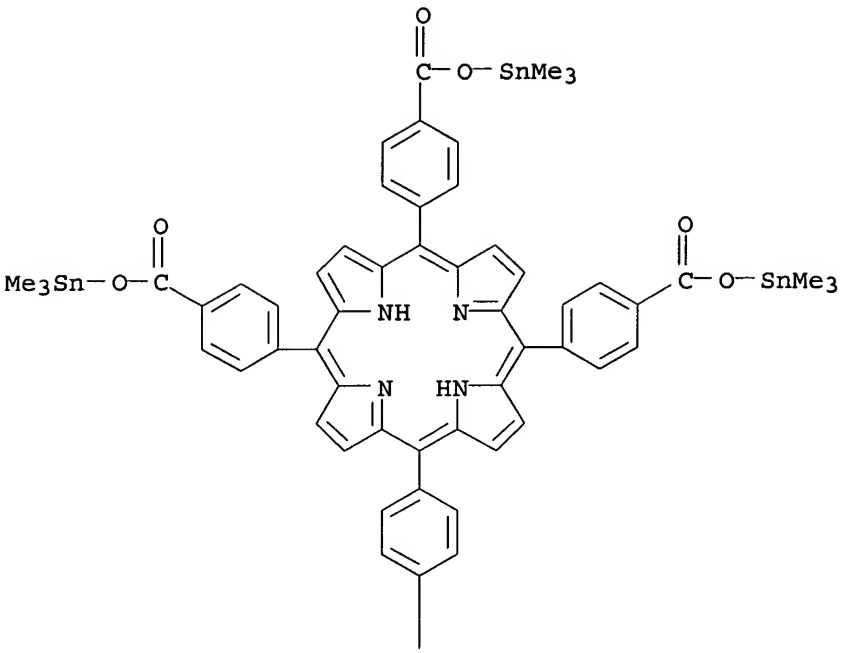


IT **193556-04-6P 193556-06-8P**
RL: ADV (Adverse effect, including toxicity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, cytotoxicity and solid-state and solution-phase structural aspects of)
RN 193556-04-6 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(trimethylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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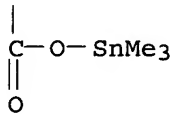
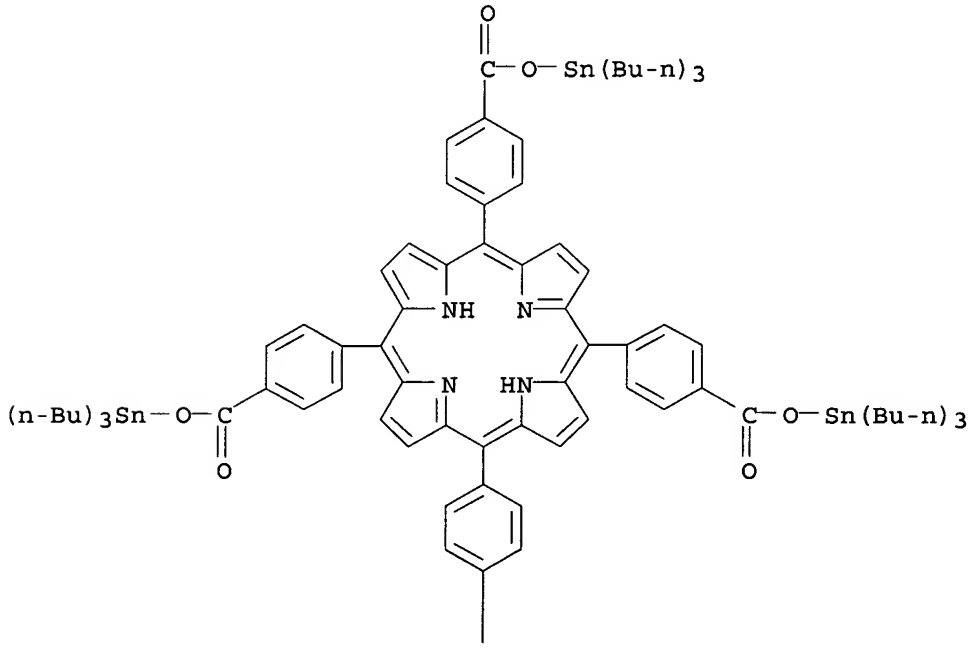
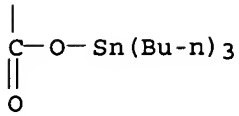


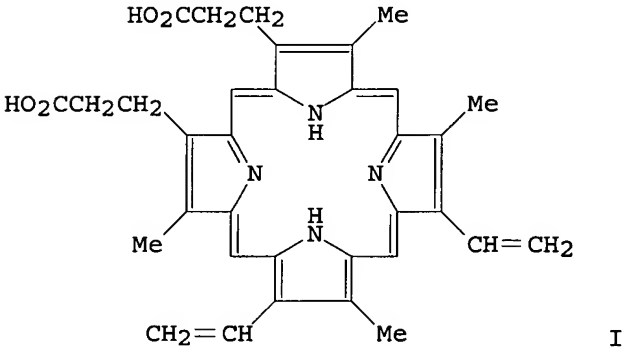
RN 193556-06-8 CAPLUS
CN 21H,23H-Porphine, 5,10,15,20-tetrakis[4-[[(tributylstannyl)oxy]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A





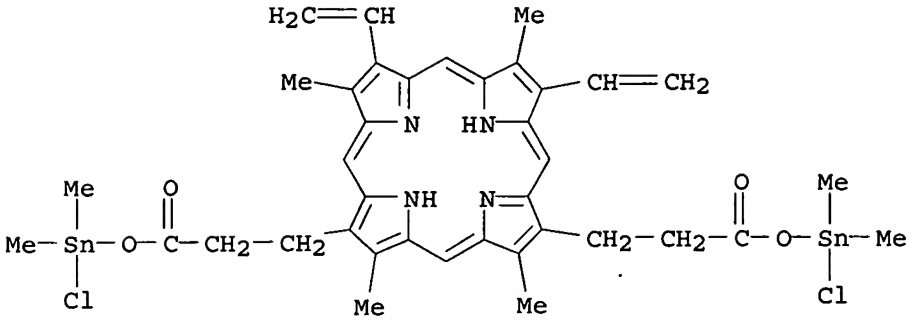
L9 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:495690 CAPLUS
DN 119:95690
TI Organometallic **complexes** with biological molecules. I. Diorganotin(IV) chloro protoporphyrin IX **complexes**: solid-state and solution-phase characterization
AU Pellerito, Lorenzo; Pellerito, Alessandro; Maggio, Francesco; Beltramini, Mariano; Salvato, Benedetto; Ricchelli, Fernanda
CS Dip. Chim. Inorg., Univ. Palermo, Palermo, I-90123, Italy
SO Applied Organometallic Chemistry (1993), 7(2), 79-84
CODEN: AOCHEX; ISSN: 0268-2605
DT Journal
LA English
GI



I

AB Protoporphyrin IX (H4PPIX, shown as I) **complexes** of diorganotin(IV) chloro moieties with formula (R2SnCl)2H2PPIX (R = Me, Bu and Ph) have been obtained and their solid-state and solution-phase configurations have been studied through spectroscopic investigations. Coordination of the side-chain carboxylates of H4PPIX to R2Sn(IV)Cl moieties, with bridging carboxylate (COO-) has been inferred by comparison of the free and coordinated H4PPIX IR spectra, while the occurrence of a five-coordinated tin(IV) atom in a cis-R2 trigonal bipyramidal structure has been deduced, for all of the **synthesized complexes**, by rationalization of the nuclear quadrupole splitting parameters, according to the point-charge model formalism. Finally, the solution-phase spectral features of (R2SnCl)2-H2PPIX are in agreement with the monomeric character of the protoporphyrin IX, under the exptl. conditions used.

IT **148873-23-8P 148873-24-9P 148873-25-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, IR, Moessbauer, and fluorescence emission spectra of)
RN 148873-23-8 CAPLUS
CN 21H,23H-Porphine, 2,8-bis[3-[(chlorodimethylstannyl)oxy]-3-oxopropyl]-12,17-diethenyl-3,7,13,18-tetramethyl- (9CI) (CA INDEX NAME)



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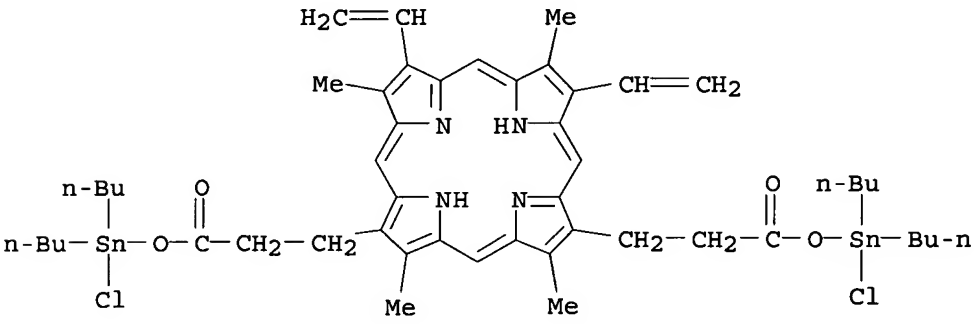
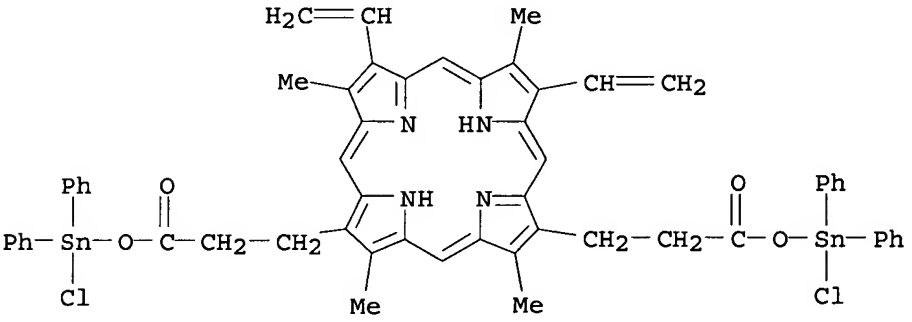


RN 148873-25-0 CAPLUS
CN 21H,23H-Porphine, 2,8-bis[3-[(chlorodiphenylstannyl)oxy]-3-oxopropyl]-12,17-diethenyl-3,7,13,18-tetramethyl- (9CI) (CA INDEX NAME)



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FILE 'REGISTRY' ENTERED AT 17:22:52 ON 06 APR 2006
L1 STRUCTURE UPLOADED
L2 50 S L1 SSS SAM
L3 26394 S L1 SSS FULL
L4 57 S L3 AND SN/ELS

FILE 'CAPLUS' ENTERED AT 17:24:22 ON 06 APR 2006
L5 0 S L4 AND MESOPORPHYRIN
L6 769 S L3 AND MESOPORPHYRIN
L7 19 S L4
L8 17 S L4 AND COMPLEX
L9 10 S L8 AND (PROCESS OR METHOD OR SYNTH?)

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TERMINAL (ENTER 1, 2, 3, OR ?):2


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                   IPC reform
 NEWS  4  DEC 23   New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
                   USPAT2
 NEWS  5  JAN 13   IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
 NEWS  6  JAN 13   New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
                   INPADOC
 NEWS  7  JAN 17   Pre-1988 INPI data added to MARPAT
 NEWS  8  JAN 17   IPC 8 in the WPI family of databases including WPIFV
 NEWS  9  JAN 30   Saved answer limit increased
 NEWS 10  JAN 31   Monthly current-awareness alert (SDI) frequency
                   added to TULSA
 NEWS 11  FEB 21   STN AnaVist, Version 1.1, lets you share your STN AnaVist
                   visualization results
 NEWS 12  FEB 22   Status of current WO (PCT) information on STN
 NEWS 13  FEB 22   The IPC thesaurus added to additional patent databases on STN
 NEWS 14  FEB 22   Updates in EPFULL; IPC 8 enhancements added
 NEWS 15  FEB 27   New STN AnaVist pricing effective March 1, 2006
 NEWS 16  FEB 28   MEDLINE/LMEDLINE reload improves functionality
 NEWS 17  FEB 28   TOXCENTER reloaded with enhancements
 NEWS 18  FEB 28   REGISTRY/ZREGISTRY enhanced with more experimental spectral
                   property data
 NEWS 19  MAR 01   INSPEC reloaded and enhanced
 NEWS 20  MAR 03   Updates in PATDPA; addition of IPC 8 data without attributes
 NEWS 21  MAR 08   X.25 communication option no longer available after June 2006
 NEWS 22  MAR 22   EMBASE is now updated on a daily basis
 NEWS 23  APR 03   New IPC 8 fields and IPC thesaurus added to PATDPAFULL
 NEWS 24  APR 03   Bibliographic data updates resume; new IPC 8 fields and IPC
                   thesaurus added in PCTFULL
 NEWS 25  APR 04   STN AnaVist $500 visualization usage credit offered

 NEWS EXPRESS  FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
               V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
               http://download.cas.org/express/v8.0-Discover/

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FILE 'HOME' ENTERED AT 16:35:55 ON 06 APR 2006

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COST IN U.S. DOLLARS

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**********
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
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Structure search iteration limits have been increased. See HELP SLIMITS
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REGISTRY includes numerically searchable data for experimental and
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experimental property data in the original document. For information
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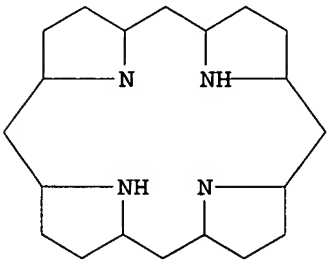


Structure attributes must be viewed using STN Express query preparation.

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 30.8% PROCESSED     2000 ITERATIONS                                    50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:       125108 TO   134772
PROJECTED ANSWERS:           23265 TO    27541

L2           50 SEA SSS SAM L1

=> d scan

L2    50 ANSWERS   REGISTRY  COPYRIGHT 2006 ACS on STN
IN    21H,23H-Porphine, 5,15-bis[4-(di-1H-pyrrol-2-ylmethyl)phenyl]-10,20-
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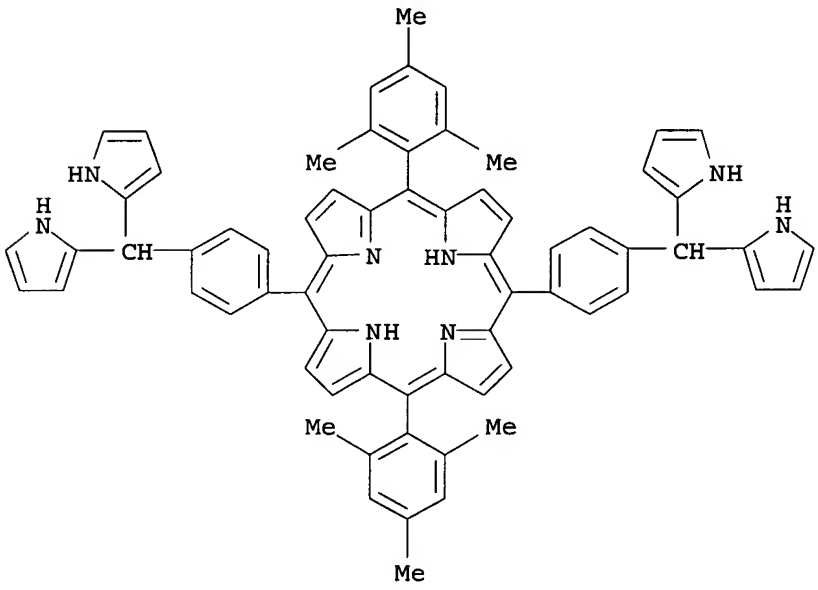


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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**


HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

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FULL SCREEN SEARCH COMPLETED -   131900 TO ITERATE

100.0% PROCESSED   131900 ITERATIONS                          26394 ANSWERS
SEARCH TIME: 00.00.01

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=> s l3 and Sn/ELS
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L4          57 L3 AND SN/ELS

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L5      STRUCTURE UPLOADED
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L5 HAS NO ANSWERS
L5                STR
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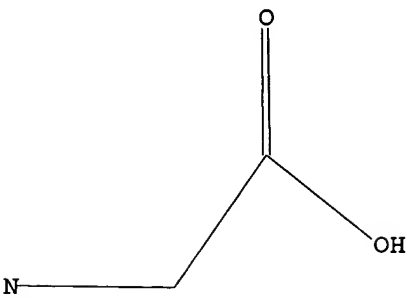


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100.0% PROCESSED         0 ITERATIONS                                0 ANSWERS
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PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET):             0 TO         0
PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET):                0 TO         0

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FULL ESTIMATED COST                                   341.72     341.93

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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 6 Apr 2006  VOL 144 ISS 15
FILE LAST UPDATED: 5 Apr 2006  (20060405/ED)

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       1064719 AMINO
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=> s l4 and process
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       1501453 PROCESSES
       3317530 PROCESS
                  (PROCESS OR PROCESSES)
L9           1 L4 AND PROCESS

=> dis l9 bib abs hitstr

L9   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   1999:649500  CAPLUS
DN   131:345713
TI   "Axial-Bonding"-Type Hybrid Porphyrin Arrays: Synthesis, Spectroscopy,
     Electrochemistry, and Singlet State Properties
AU   Giribabu, L.; Rao, T. Anita; Maiya, Bhaskar G.
CS   School of Chemistry, University of Hyderabad, Hyderabad, 500 046, India
SO   Inorganic Chemistry (1999), 38(22), 4971-4980
     CODEN: INOCAJ; ISSN: 0020-1669
PB   American Chemical Society
DT   Journal
LA   English
AB   P(V), Ge(IV), and Sn(IV) porphyrin-based, axial-bonding-type hybrid
     trimers were readily constructed by employing a new building-block
     approach.  The approach is modular in nature, and it involves simple
     inorg. reactions such as axial bond formation of main group element containing
     porphyrins and insertion of metal/metalloid ions into the porphyrin
     cavity.  The architecture of these arrays is such that, while a P(V),
     Ge(IV), or Sn(IV) complex of meso-5,10,15,20-(tetratolyl)porphyrin forms
     the basal scaffolding unit, the free-base, vanadyl, Co(II), Ni(II),
     Cu(II), or Zn(II) porphyrins occupy the two axial sites via an aryloxy
     bridge.  Synthesis of an all-P array containing three P(V) subunits also was
     accomplished.  Each new porphyrin array studied was fully characterized by
     various phys. methods that include mass (FAB), UV-visible, IR,
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fluorescence, ESR, and 1H and 31P NMR (NMR; 1-dimensional and 2D) spectroscopies and cyclic voltammetry. The UV-visible and ESR spectral parameters and also the redox potential data suggest that there exists no interaction between the π-planes of the constituent monomeric porphyrins in these arrays. Detailed 1H NMR studies carried out with the trimers containing diamagnetic porphyrins reveal characteristic shielding/deshielding effects for the various protons on the axial porphyrin subunits. The ground state data, as probed by the spectroscopic and electrochem. techniques, collectively indicate that there exists a sym. but nonparallel disposition of the two axial porphyrins with respect to plane of the central porphyrin. Singlet state activity of the photoactive trimers was probed by the steady state fluorescence method with selective excitation into the bands corresponding to the two constituent monomeric species. Anal. of the fluorescence emission and excitation spectral data suggests the occurrence of electronic energy transfer as well as photoinduced electron transfer reactions in trimers endowed with free-base or Zn(II) porphyrin axial subunits. Efficiencies of the excited state **processes** of these trimeric arrays are dependent on the type of metal/metalloid ions present in the porphyrin crevice.

IT **250220-04-3 250220-05-4 250220-77-0**
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(elec. potential of couple containing)

RN 250220-04-3 CAPLUS

CN Stannate(1-), [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

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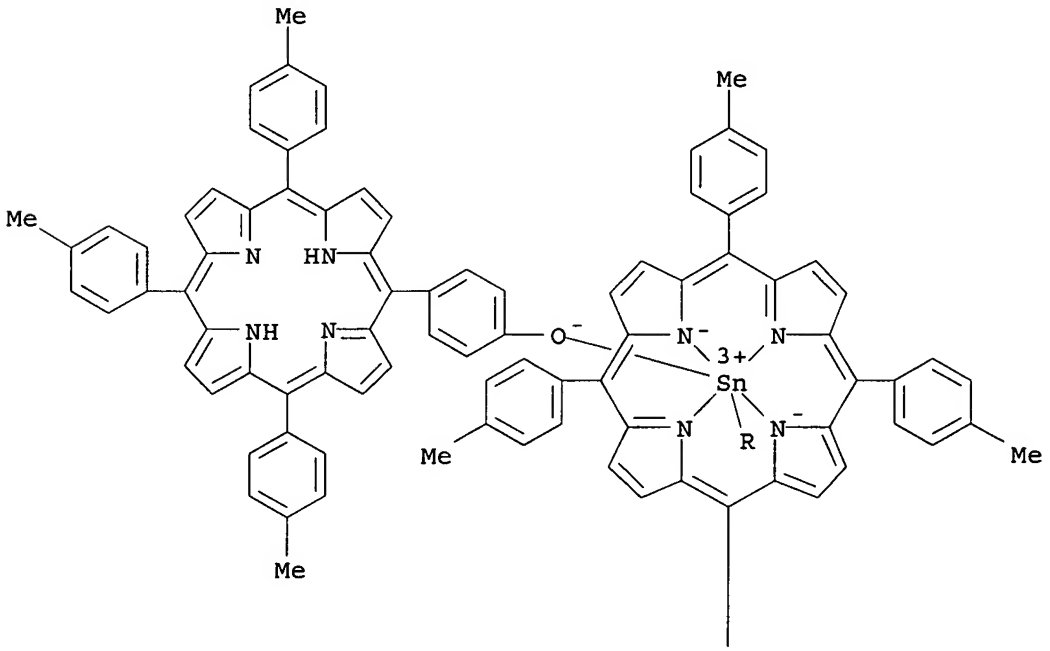


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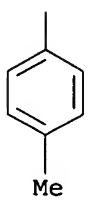

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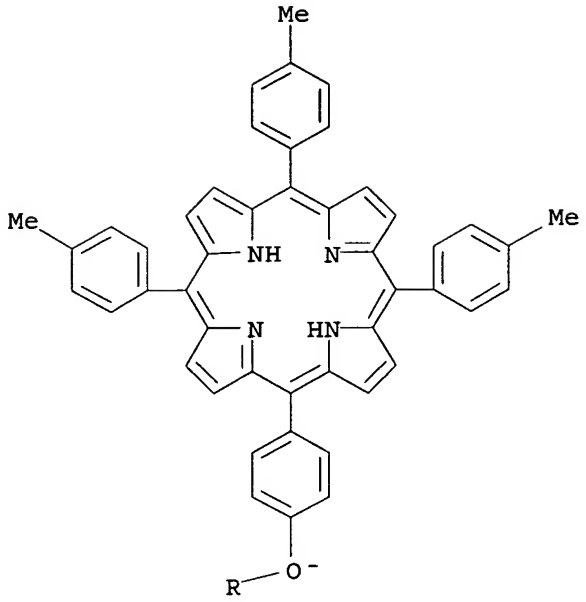


RN 250220-05-4 CAPLUS
CN Tin(1+), [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

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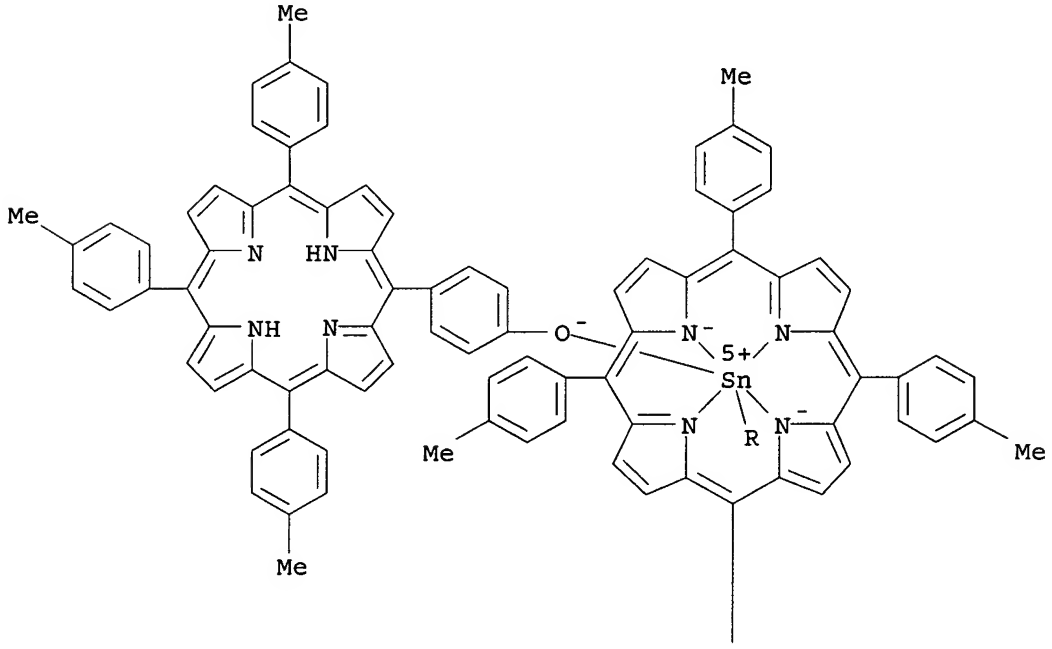

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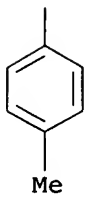


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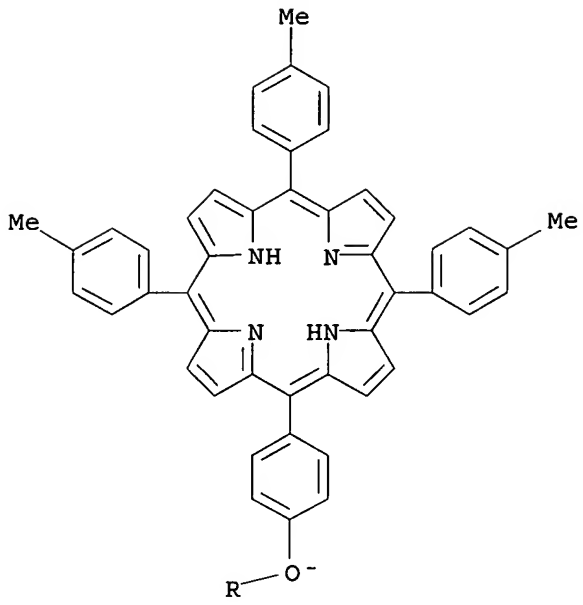


RN 250220-77-0 CAPLUS

CN Stannate(2-), [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

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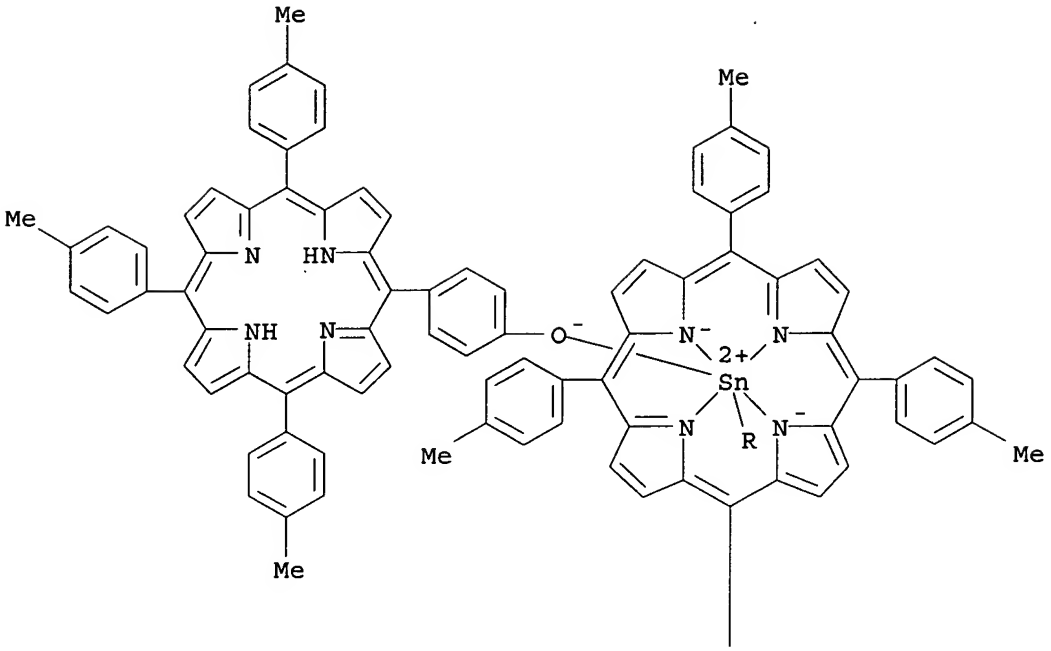


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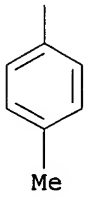


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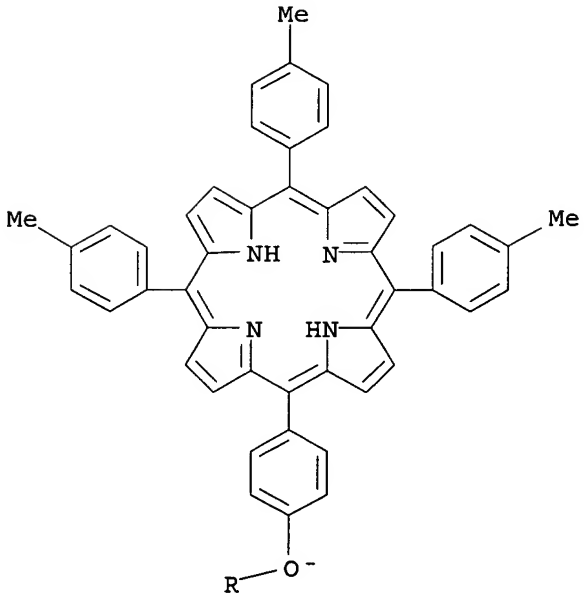


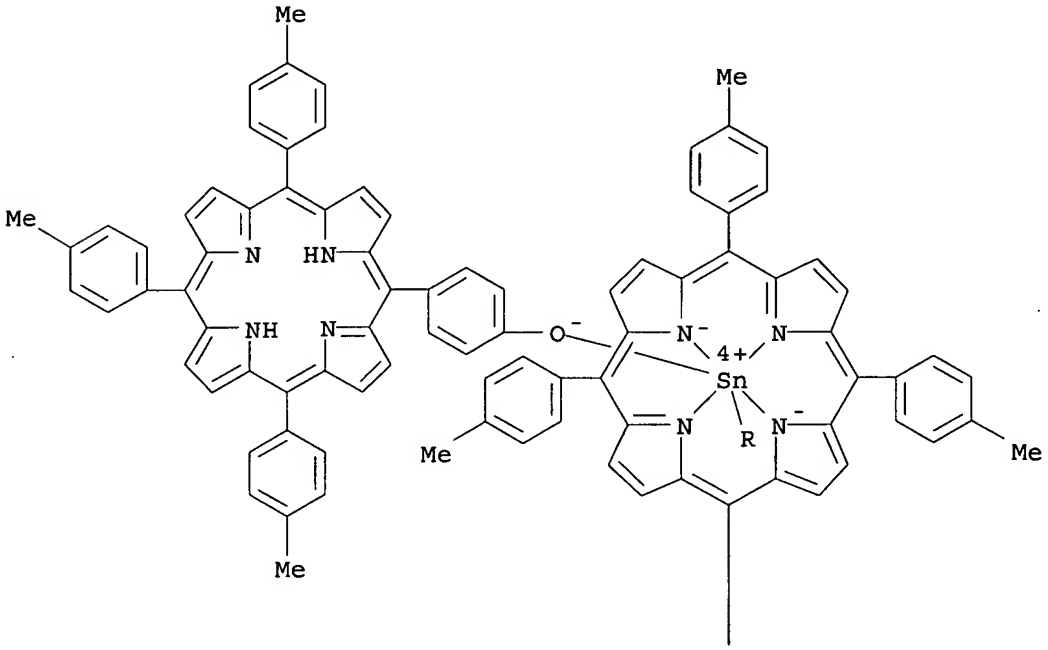

IT **250219-89-7P**

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and NMR and cyclic voltammetry and fluorescence)

RN 250219-89-7 CAPLUS

CN Tin, [5,10,15,20-tetrakis(4-methylphenyl)-21H,23H-porphinato(2-)-κN21,κN22,κN23,κN24]bis[4-[10,15,20-tris(4-methylphenyl)-21H,23H-porphin-5-yl]phenolato-κO]-, (OC-6-12)- (9CI) (CA INDEX NAME)

PAGE 1-A

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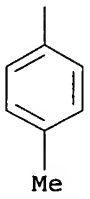

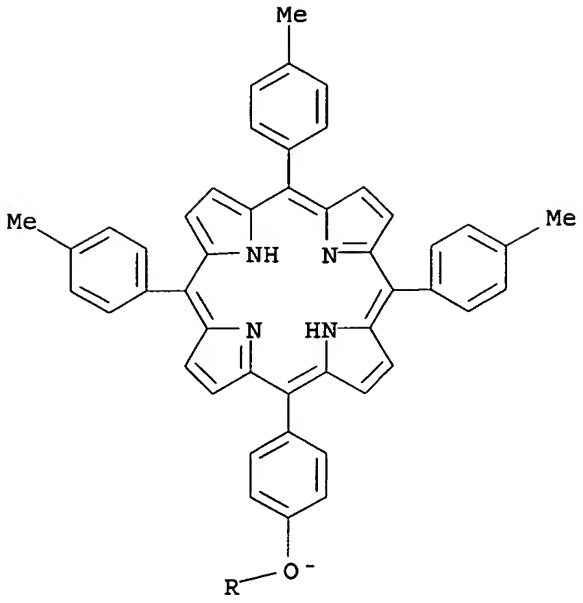


RE.CNT 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s Levinson Benjamin/AU
L10 7 LEVINSON BENJAMIN/AU

=> dis l10 1-7 bib abs

L10 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:878200 CAPLUS
DN 141:359890
TI Preparation of metal mesoporphyrin halide compounds
IN Vukovich, Robert; **Levinson, Benjamin**; Drummond, George S.; Caroselli, Robert; Antczak, Kazimierz G.; Boucher, Christopher; Mortimer, Richard; Levin, Danny; Cooke, Keith A.
PA Wellspring Pharmaceutical Corporation, USA
SO U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U.S. Ser. No. 453,815.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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| PI US 2004210048 | A1 | 20041021 | US 2004-812156 | 20040329 |
| US 2003225264 | A1 | 20031204 | US 2003-453815 | 20030603 |
| US 6818763 | B2 | 20041116 | | |
| CA 2487426 | AA | 20031211 | CA 2003-2487426 | 20030603 |
| EP 1509527 | A2 | 20050302 | EP 2003-736811 | 20030603 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2005528444 | T2 | 20050922 | JP 2004-509690 | 20030603 |
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| WO 2005103056 | A2 | 20051103 | WO 2004-US39240 | 20041124 |
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NE, SN, TD, TG

PRAI US 2002-385498P P 20020604
US 2003-453815 A2 20030603
WO 2003-US17426 W 20030603
US 2004-812156 A 20040329

OS CASREACT 141:359890

AB A method of preparing metal mesoporphyrin halide compds. is described. The metal mesoporphyrin halide compound may be formed by forming a novel mesoporphyrin IX intermediate compound and then converting the mesoporphyrin IX intermediate to the metal mesoporphyrin halide through metal insertion. The novel intermediate compound may be formed by a catalytic hydrogenation of hemin in acid and subsequent recovery.

L10 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:511587 CAPLUS
DN 141:222781
TI Neutral Endopeptidase Protein Expression and Prognosis in Localized Prostate Cancer
AU Osman, Iman; Yee, Herman; Taneja, Samir S.; **Levinson, Benjamin**; Zeleniuch-Jacquotte, Anne; Chang, Caroline; Nobert, Craig; Nanus, David M.
CS Department of Urology, New York University Cancer Institute, New York, NY, USA
SO Clinical Cancer Research (2004), 10(12, Pt. 1), 4096-4100
CODEN: CCREF4; ISSN: 1078-0432
PB American Association for Cancer Research
DT Journal
LA English
AB Neutral endopeptidase (NEP) is a cell-surface peptidase that inactivates neuropeptide growth factors implicated in prostate cancer progression. The clin. significance of decreased NEP expression observed in prostate cancer is unclear. We investigated whether decreased NEP expression in localized prostate cancers is associated with prostate-specific antigen (PSA) relapse after radical prostatectomy. NEP expression patterns were examined by immunohistochem. in 223 men, who underwent radical prostatectomy between 1990 and 2000 at the Veterans Administration Medical center (New York, NY) with available representative tissues and adequate follow up. We also examined whether hypermethylation of the NEP promoter contributes to down-regulation of NEP protein expression in a subset of patients that showed decreased NEP expression (n = 22). Three patterns of NEP expression were observed: (a) membranous expression similar to benign prostate epithelium (n = 82; 37%); (b) complete loss of NEP expression in prostate cancer compared with adjacent benign prostate glands (n = 105; 47%); and (c) heterogeneous NEP expression (n = 36; 16%). In a multivariate anal., complete loss of NEP expression was associated with PSA relapse after controlling for grade, stage, pretreatment PSA, and race simultaneously (hazard ratio, 1.99; 95% confidence interval, 1.13-3.52; 2-sided $\chi 2$ P = 0.017). In addition, DNA hypermethylation of the NEP promoter was frequently (73%) identified in a subset of 22 of cases that showed decreased NEP expression. These data suggest that decreased NEP expression might contribute to progression of localized prostate cancer after surgery. Data also suggest that methylation is an important mechanism of NEP protein silencing. Larger prospective studies are required for confirmation.
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:414629 CAPLUS
DN 140:416750
TI Water-soluble mesoporphyrin compounds and methods of preparation
IN **Levinson, Benjamin**; Drummond, George S.
PA USA
SO U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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PI US 2004097481 A1 20040520 US 2003-713889 20031114
CA 2506081 AA 20040603 CA 2003-2506081 20031118
WO 2004045546 A2 20040603 WO 2003-US36885 20031118
WO 2004045546 A3 20040708
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EP 1567165 A2 20050831 EP 2003-786815 20031118
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JP 2006506440 T2 20060223 JP 2004-553902 20031118
PRAI US 2002-427851P P 20021120
WO 2003-US36885 W 20031118
AB Water soluble Sn mesoporphyrin compds. are described. Methods of preparation of water soluble metal mesoporphyrin compds. and pharmaceutical prepns. are also described. Thus, hemin is catalytically reduced and demetalated to give mesoporphyrin IX (H2L) as the formate which was reacted with SnCl2 to give SnLCl2 in 83-93 % yield. A SnLCl2 complexes with arginate and other amino acids was prepared Pharmaceutical formulation of the SnLCl2 complexes with arginate and other amino acids were obtained for use in treatment of hyperbilirubinemia and psoriasis.

L10 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:49956 CAPLUS
DN 140:285272
TI Altered N-myc Downstream-Regulated Gene 1 Protein Expression in African-American Compared with Caucasian Prostate Cancer Patients
AU Caruso, Robert P.; **Levinson, Benjamin**; Melamed, Jonathan; Wieczorek, Rosemary; Taneja, Samir; Polsky, David; Chang, Caroline; Zeleniuch-Jacquotte, Anne; Salnikow, Konstantin; Yee, Herman; Costa, Max; Osman, Iman
CS New York University Cancer Institute, and Dermatology, Pathology, Environmental Medicine, Departments of Urology, Kaplan Comprehensive Cancer Center, New York, NY, USA
SO Clinical Cancer Research (2004), 10(1, Pt. 1), 222-227
CODEN: CCREF4; ISSN: 1078-0432
PB American Association for Cancer Research
DT Journal
LA English
AB The protein encoded by N-myc downstream-regulated gene 1 (NDRG1) is a recently discovered protein whose transcription is induced by androgens and hypoxia. We hypothesized that NDRG1 expression patterns might reveal a biol. basis for the disparity of clin. outcome of prostate cancer patients with different ethnic backgrounds. Patients who underwent radical prostatectomy between 1990 and 2000 at Veterans Administration Medical Center of New York were examined We studied 223 cases, including 157 African Americans and 66 Caucasians (T2, n = 144; ≥T3, n = 79; Gleason <7, n = 122; ≥7, n = 101). Three patterns of NDRG1 expression were identified in prostate cancer: (a) intense, predominately membranous staining similar to benign prostatic epithelium; (b) intense, nucleocytoplasmic localization; and (c) low or undetectable expression. We then examined the correlations between patients' clinicopathol. parameters and different NDRG1 expression patterns. In this study of patients with equal access to care, African-American ethnic origin was an independent predictor of prostate-specific antigen recurrence ($P < 0.05$). We also observed a significant correlation between different patterns of NDRG1 expression and ethnic origin. Pattern 2 was less frequent in African Americans (21% vs. 38%), whereas the reverse was observed for pattern 3 (60% in African Americans vs. 44% in Caucasians; $P = 0.03$). This association remained significant after controlling for both grade and stage simultaneously ($P = 0.02$). Our data suggest that different NDRG1 expression patterns reflect differences in the response of prostatic

epithelium to hypoxia and androgens in African-American compared with Caucasian patients. Further studies are needed to determine the contribution of NDRG1 to the disparity in clin. outcome observed between the two groups.
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:950107 CAPLUS
DN 139:402994
TI Preparation of metal mesoporphyrin halide compounds
IN Vukovich, Robert A.; **Levinson, Benjamin**; Drummond, George S.; Caroselli, Robert; Antczak, Kazimierz G.; Boucher, Christopher; Mortimer, Richard
PA Wellspring Pharmaceutical Corp., USA
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

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| PI | US 2003225264 | A1 | 20031204 | US 2003-453815 | 20030603 |
| | US 6818763 | B2 | 20041116 | | |
| | CA 2487426 | AA | 20031211 | CA 2003-2487426 | 20030603 |
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| | WO 2003101999 | A3 | 20040910 | | |
| | W: AU, CA, JP, MX, NO, NZ, ZA | | | | |
| | RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR | | | | |
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| | NO 2004005113 | A | 20050303 | NO 2004-5113 | 20041124 |
| | ZA 2004009670 | A | 20050718 | ZA 2004-9670 | 20041130 |
| PRAI | US 2002-385498P | P | 20020604 | | |
| | US 2003-453815 | A2 | 20030603 | | |
| | WO 2003-US17426 | W | 20030603 | | |

OS CASREACT 139:402994
AB A method of preparing metal mesoporphyrin halide compds. is described. The metal mesoporphyrin halide compound may be formed by forming a novel mesoporphyrin IX intermediate compound and then converting the mesoporphyrin IX intermediate to the metal mesoporphyrin halide through metal insertion. The novel intermediate compound may be formed by a catalytic hydrogenation of hemin in acid and subsequent recovery. Thus, hemin is catalytically reduced and demetalated to give mesoporphyrin IX (H2L) as the formate which was reacted with SnCl2 to give SnLCl2 in 83-93 % yield.
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:528807 CAPLUS
DN 139:274710
TI Altered expression of p27 and Skp2 proteins in prostate cancer of African-American patients
AU Drobnjak, Marija; Melamed, Jonathan; Taneja, Samir; Melzer, Kate; Wieczorek, Rosemary; **Levinson, Benjamin**; Zeleniuch-Jacquotte, Anne; Polsky, David; Ferrara, Jay; Perez-Soler, Roman; Cordon-Cardo, Carlos; Pagano, Michele; Osman, Iman
CS Department of Pathology, Memorial Sloan-Kettering Cancer Center, New York, NY, USA
SO Clinical Cancer Research (2003), 9(7), 2613-2619
CODEN: CCREF4; ISSN: 1078-0432
PB American Association for Cancer Research
DT Journal
LA English
AB The purpose is to investigate the clin. relevance of altered patterns of p27 and Skp2 expression in African-American patients with localized

prostate cancer. The abundance of p27, an inhibitor of cell proliferation, is controlled by Skp2-dependent proteolysis. A well-characterized cohort of 162 African-Americans who underwent radical prostatectomy at the Veterans Affairs Medical Center of New York between 1990 and 2000 was studied. We analyzed p27 and Skp2 expression by immunohistochem. Altered expression of p27 (defined as <40% tumor cells expressing the protein) and Skp2 (defined as ≥20% tumor cells expressing the protein) were correlated with clinicopathol. parameters and time to prostate-specific antigen (PSA) recurrence. Altered expression of p27 and Skp2 was observed in 112 of 162 (69.1%) and 93 of 162 (57.4%) cases, resp. Inverse patterns of Skp2 and p27 protein expression were seen in 87 of 162 (53.7%) cases. A marginally significant association was found between Skp2 overexpression and extracapsular extension (P = 0.065). Moreover, patients with Skp2 overexpression had a 2.77 yr decreased median time to PSA recurrence compared with patients with low Skp2 expression; however, the difference was not statistically significant. In multivariate anal., only tumor grade and stage independently predicted PSA recurrence in this cohort. Our data suggest a role for Skp2 overexpression in prostate cancer pathogenesis that might not be exclusively related to p27 degradation More studies are needed to determine the mechanistic role of Skp2 in prostate cancer.

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:435093 CAPLUS
DN 105:35093
TI Aztreonam concentration in abdominal tissues and bile
AU Condon, Robert E.; Friedhoff, Lawrence T.; Edmiston, Charles E.; **Levinson, Benjamin**
CS Surg. Res. Microbiol. Lab., Med. Coll. Wisconsin, Milwaukee, WI, 53226, USA
SO Antimicrobial Agents and Chemotherapy (1986), 29(6), 1101-3
CODEN: AMACCQ; ISSN: 0066-4804
DT Journal
LA English
AB Abdominal tissue, serum, and bile samples were obtained from human patients given a single, 2-g i.v. infusion of aztreonam [78110-38-0] immediately prior to an elective abdominal operation. Samples were obtained at 0 to 6 h after dosing. Mean concns. in tissues and fluids and specimen/serum ratios are reported. Levels in tissue and bile exceeded the reported min.-inhibitory concns. for 90% of most members of the family Enterobacteriaceae for up to 6 h.

=> s Drummond George S/AU
L11 72 DRUMMOND GEORGE S/AU

=> s l11 and porphyrin
34919 PORPHYRIN
24336 PORPHYRINS
41065 PORPHYRIN
(PORPHYRIN OR PORPHYRINS)
L12 23 L11 AND PORPHYRIN

=> dis l12 1-23 bib abs

L12 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:131357 CAPLUS
DN 128:162725
TI Sn-mesoporphyrin suppression of hyperbilirubinemia in EHBR/Eis rats, an animal model of Dubin-Johnson syndrome
AU **Drummond, George S.**; Kappas, Attallah
CS Rockefeller Hospital, New York, NY, 10021, USA
SO Pharmacology (1998), 56(3), 158-164
CODEN: PHMGBN; ISSN: 0031-7012
PB S. Karger AG
DT Journal
LA English

AB Sn-mesoporphyrin (SnMP), a potent inhibitor of heme oxygenase (HO), controlled hyperbilirubinemia in rats of the mutant strain EHBR/Eis. This mutant strain displays pronounced conjugated hyperbilirubinuria and dark pigmentation of hepatocytes, characteristics of the Dubin-Johnson syndrome. SnMP administered at a dose of 10 μmol/kg body weight produced an immediate decrease in blood plasma bilirubin concns. which could be maintained by weekly injections of this synthetic heme analog. Marked inhibition of HO activity was demonstrated in liver, kidney, and spleen but not in brain. These results demonstrate that SnMP can lower plasma bilirubin concns. for extended periods in a new mutant rat model of Dubin-Johnson syndrome.

L12 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:137168 CAPLUS
DN 126:233645
TI Zinc **porphyrins**: potent inhibitors of hematopoieses in animal and human bone marrow
AU Lutton, John D.; Abraham, Nader G.; **Drummond, George S.**; Levere, Richard D.; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Proceedings of the National Academy of Sciences of the United States of America (1997), 94(4), 1432-1436
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
AB The effects of selected heme analogs on heme oxygenase activity in tissues and on human and rabbit bone marrow hematopoietic colony growth were examined Zinc protoporphyrin (ZnPP) and zinc mesoporphyrin (ZnMP), at concns. ranging between 1 and 20 μM, produced significant inhibition of human and rabbit bone marrow erythroid (CFU-E, BFU-E) and myeloid (CFU-GM) colony growth. The growth inhibition produced by ZnPP or ZnMP was not overcome with exposure of cultures to elevated levels of the growth factors erythropoietin and granulocyte-macrophage colony stimulating factor. In contrast, tin protoporphyrin and tin mesoporphyrin did not display any significant bone marrow toxicity when used at similar concns. In other studies, differential effects of tin mesoporphyrin and ZnMP administered i.v. on kidney heme oxygenase were demonstrated. Chromium mesoporphyrin administered i.v. proved lethal to animals. These results indicate that exposure of bone marrow to ZnPP and ZnMP can be deleterious to hematopoietic cells and raise the possibility that ZnPP, which is endogenously formed and found in high concentration in red blood cells in lead-poisoned children, may itself participate in the bone marrow toxicity produced by this metal.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:196368 CAPLUS
DN 124:278723
TI Effects of a series of metalloporphyrins on adrenal, testicular and thyroid function in rats
AU **Drummond, George S.**; Smith, Terry J.; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, USA
SO Pharmacology (1996), 52(3), 178-86
CODEN: PHMGBN; ISSN: 0031-7012
PB Karger
DT Journal
LA English
AB The authors have extended the authors earlier studies [Pharmacol. 1986:34:9-16] on the effect of certain synthetic heme analogs and cobalt chloride (CoCl2) on endocrine functions mediated by the hypothalamic-pituitary axis to examine specifically the ability of Sn-protoporphyrin (SnPP) and Sn-mesoporphyrin (SnMP) to perturb adrenal, testicular and thyroid function since there is interest in the use of Sn-protoporphyrin (SNPP) in the treatment of hyperbilirubinemia of the newborn. SnPP and SnMP when administered to adult male rats did not alter serum corticosterone, testosterone, thyroxine or triiodothyronine levels when compared to control animals. In addition, administration of exogenous

adrenocorticotropic hormone produced an increase in serum corticosterone levels that was comparable in placebo-treated and SnPP- and SnMP-treated animals. These studies involved doses of both compds. substantially greater than those used clin. The results clearly indicate that SnMP, presently the compound of choice for use in newborns, and SnPP do not in the doses studied impair adrenal, testicular and thyroid function in vivo.

L12 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:52453 CAPLUS
DN 118:52453
TI Control of heme and iron concentrations in body tissues with tin **porphyrin** compounds
IN Kappas, Attallah; **Drummond, George S.**
PA Rockefeller University, USA
SO U.S., 19 pp. Cont.-in-part of U.S. Ser. No. 325,086, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 5162313 | A | 19921110 | US 1990-485170 | 19900226 |
| PRAI US 1989-325086 | B2 | 19890316 | | |

AB A method for increasing the rates of excretion of Fe and heme in a mammal in need of such increased disposal due to hemorrhage-associated body tissue injury comprises parenteral administration of Sn protoporhyrin, Sn mesoporphyrin, or Sn diiododeuteroporphyrin in an amount sufficient to effect the increase. Increase of output of Fe and heme in bile by Sn protoporphyrin IX was demonstrated in rats either administered heme or with damaged erythrocytes.

L12 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:207623 CAPLUS
DN 116:207623
TI Intestinal heme oxygenase inhibition and increased biliary iron excretion by metalloporphyrins
AU **Drummond, George S.**; Rosenberg, Daniel W.; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Gastroenterology (1992), 102(4, Pt. 1), 1170-5
CODEN: GASTAB; ISSN: 0016-5085
DT Journal
LA English
AB The effects of synthetic metalloporphyrins on heme oxygenase activity in the epithelium of the proximal region of the small intestine were examined both in vitro and in vivo in male Sprague-Dawley rats. Metalloporphyrins, which inhibit hepatic heme oxygenase in vitro, also inhibit intestinal heme oxygenase. Chromium and tin **porphyrins** are the most potent inhibitors of the intestinal enzyme in vitro. Oral administration of Sn-protoporphyrin (25 μmol/kg body weight) resulted in inhibition of intestinal heme oxygenase; however, no effect was observed on the splenic, hepatic, or renal enzymes. Metal analyses of these tissues showed essentially no intestinal absorption of the metalloporphyrin. Oral administration of Cr-mesoporphyrin (25 μmol/kg body wt) also resulted in inhibition of intestinal heme oxygenase activity. Zinc and manganese mesoporphyrin did not inhibit intestinal heme oxygenase activity when administered orally. Microsomal intestinal heme oxygenase activity was inhibited in a dose-dependent manner by antiserum raised in rabbit against rat hepatic heme oxygenase. The parenteral administration of metalloporphyrin inhibitors of heme oxygenase to bile duct-cannulated rats resulted in a significant increase in iron levels in the bile.

L12 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:566633 CAPLUS
DN 115:166633
TI Preparation and use of liposomes as carriers for metalloporphyrins as heme oxygenase inhibitors in targeting therapy
IN Kappas, Attallah; **Drummond, George S.**
PA Rockefeller University, USA
SO PCT Int. Appl., 36 pp.

CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9104667 | A1 | 19910418 | WO 1990-US5708 | 19901003 |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE | | | | |
| | US 5010073 | A | 19910423 | US 1990-485174 | 19900226 |
| | CA 2042576 | AA | 19910406 | CA 1990-2042576 | 19901003 |
| | AU 9065440 | A1 | 19910428 | AU 1990-65440 | 19901003 |
| | AU 634299 | B2 | 19930218 | | |
| | EP 446340 | A1 | 19910918 | EP 1990-915389 | 19901003 |
| | R: DE, FR, GB, IT | | | | |
| | JP 04502019 | T2 | 19920409 | JP 1990-514374 | 19901003 |
| PRAI | US 1989-417298 | A | 19891005 | | |
| | US 1990-485174 | A | 19900226 | | |
| | WO 1990-US5708 | A | 19901003 | | |

AB A pharmaceutical composition for inhibition of heme oxygenase activity in e.g. jaundice treatment comprises liposomal metalloporphyrin selected from the group consisting of Sn, Cr, Zn, and Mg protoporphyrin, mesoporphyrin, and diiododeuteroporphyrin. The compns. selectively target the spleen after parenteral administration. Thus, phosphatidylcholine from egg yolk and metalloporphyrin (in CHCl3) were mixed and evaporated under vacuum to dryness and to this was added phosphate-buffered saline. The resultant mixture was vortexed vigorously and centrifuged at 15,000 x g for 5 min at 4° to give the liposomal preparation After i.v. injection into rats, a high concentration of Sn mesoporphyrin was detected in the spleen. Inhibition of splenic heme oxygenase by the metalloporphyrin was demonstrated.

L12 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:509476 CAPLUS
DN 115:109476
TI Tin(Sn(4+))-diiododeuteroporphyrin; an in vitro and in vivo inhibitor of heme oxygenase with substantially reduced photoactive properties
AU **Drummond, George S.**; Greenbaum, Nancy L.; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Journal of Pharmacology and Experimental Therapeutics (1991), 257(3), 1109-13
CODEN: JPETAB; ISSN: 0022-3565
DT Journal
LA English
AB Iodination of Sn-deuteroporphyrin (Ki = 0.185 μM) at positions C2 and C4 of the **porphyrin** ring results in an enhanced ability of the resulting derivative, Sn-diiododeuteroporphyrin, to inhibit (Ki = 0.069 μM) heme oxygenase activity in vitro. The potency of Sn-diiododeuteroporphyrin inhibition of bilirubin production in vivo is similar to that of Sn-protoporphyrin, but in vitro tests demonstrate that, when in solution with human serum albumin, Sn-diiododeuteroporphyrin is significantly (3-10-fold depending upon conditions) less photosensitizing than are Sn-protoporphyrin or Sn-mesoporphyrin. These findings demonstrate that halogenation of a suitable **porphyrin** macrocycle can substantially diminish photoactive properties of the compound whereas retaining its ability to act as a heme oxygenase inhibitor.

L12 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:442000 CAPLUS
DN 115:42000
TI Orally administered **porphyrins** to control intestinal iron absorption
IN Kappas, Attallah; Rosenberg, Daniel W.; **Drummond, George S.**
PA Rockefeller University, USA
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| PI | WO 9104029 | A1 | 19910404 | WO 1990-US5421 | 19900924 |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE | | | | |
| | US 5223494 | A | 19930629 | US 1990-585232 | 19900921 |
| | CA 2042398 | AA | 19910326 | CA 1990-2042398 | 19900924 |
| | CA 2042398 | C | 19951031 | | |
| | AU 9066270 | A1 | 19910418 | AU 1990-66270 | 19900924 |
| | AU 634307 | B2 | 19930218 | | |
| | EP 450041 | A1 | 19911009 | EP 1990-916138 | 19900924 |
| | EP 450041 | B1 | 19931103 | | |
| | R: DE, FR, GB, IT | | | | |
| | JP 04502020 | T2 | 19920409 | JP 1990-514957 | 19900924 |
| | JP 3035343 | B2 | 20000424 | | |
| PRAI | US 1989-411842 | A | 19890925 | | |
| | WO 1990-US5421 | A | 19900924 | | |

AB Metalloporphyrins are administered orally to inhibit Fe absorption in animals. Pharmaceuticals comprise a pharmaceutically acceptable carrier and Sn or Cr protoporphyrin or mesoporphyrin. Following oral treatment of rats with 25 μmoles Sn protoporphyrin/kg, heme oxygenase activity in the small intestinal mucosa was rapidly (within 3 h) inhibited (50% of controls), but the level returned to normal within 16-24 h after treatment.

L12 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1990:48781 CAPLUS
DN 112:48781
TI Use of metalloporphyrins to reverse the toxic effect of tumor therapy
IN Kappas, Attallah; **Drummond, George S.**; Wissel, Paul S.
PA Rockefeller University, USA
SO PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | | | | | |
|---|---|---|---|---|---|
| PI | WO 8902269 | A1 | 19890323 | WO 1988-US3052 | 19880906 |
| | W: AU, DK, JP, KR | | | | |
| | RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE | | | | |
| | AU 8825254 | A1 | 19890417 | AU 1988-25254 | 19880906 |
| | AU 603938 | B2 | 19901129 | | |
| | EP 333831 | A1 | 19890927 | EP 1988-908817 | 19880906 |
| | EP 333831 | B1 | 19920715 | | |
| | R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE | | | | |
| | JP 02501740 | T2 | 19900614 | JP 1988-507988 | 19880906 |
| | AT 78164 | E | 19920815 | AT 1988-908817 | 19880906 |
| | ES 2012547 | A6 | 19900401 | ES 1988-2760 | 19880908 |
| | DK 8902256 | A | 19890508 | DK 1989-2256 | 19890508 |
| PRAI | US 1987-93817 | A | 19870908 | | |
| | EP 1988-908817 | A | 19880906 | | |
| | WO 1988-US3052 | A | 19880906 | | |

AB Patients undergoing tumor therapy, particularly chemotherapy with anthracyclin-type agents are treated with metalloporphyrins, such as Sn protoporphyrin-IX, Sn mesoporphyrin, and Sn diiododeuteroporphyrin, to reverse toxic effects of such therapy. Rats treated with doxorubicin and Sn protoporphyrin-IX decreased hepatic heme oxygenase activity by 92% and increased α-aminolevulinate synthetase activity by 35% when compared to the group treated with doxorubicin only and the levels of hepatic cytochrome P 450 and microsomal heme were identical to the untreated group, indicating that the administration of Sn protoporphyrin-IX prevented the detrimental effect of doxorubicin on heme metabolism

L12 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1990:15907 CAPLUS
DN 112:15907
TI Effects of tin-**porphyrins** on developmental changes in hepatic cytochrome P450 content, selected P450-dependent drug-metabolizing enzyme activities and brain glutathione levels in the newborn rat

AU **Drummond, George S.**; Rosenberg, Daniel W.; Kihlstrom-Johanson, Anne C.; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Pharmacology (1989), 39(5), 273-84
CODEN: PHMGBN; ISSN: 0031-7012
DT Journal
LA English
AB Sn-mesoporphyrin is considerably more effective than Sn-protoporphyrin in inhibiting bilirubin production in the exptl. animal. The effects of Sn-mesoporphyrin, administered in doses from 1 to 20 μmol/kg, on the developmental patterns of hepatic cytochrome P 450 content and cytochrome P 450-dependent drug metabolism in rat neonates were examined at various times during the 5-wk period immediately after birth. No detrimental alterations in cytochrome P 450 content or in cytochrome P 450-dependent drug metabolism were observed In addition no deleterious effects were noted on total glutathione content in brain of Sn-mesoporphyrin-treated animals. After single doses of Sn-protoporphyrin of 20, 50, or 100 μmol/kg were administered at birth, transient decreases in hepatic cytochrome P 450 content (days 1 and 2), and ethylmorphine demethylase (days 2 and 5) and 7-ethoxycoumarin deethylase (days 1, 2 and 5) activities were observed in the period immediately after birth. However no sustained alterations in the developmental patterns of these enzymes were observed even at the highest dose (100 μmol/kg) of Sn-protoporphyrin administered. Thus, in the doses utilized in this study both metalloporphyrins have no long-term effects on cytochrome P 450-dependent drug metabolism Furthermore, in doses up to 20 μmol/kg, neither compound produced any short-term effects on hepatic cytochrome P 450 content or functional activity in newborn rats.

L12 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:44 CAPLUS
DN 110:44
TI Control of heme metabolism by synthetic metalloporphyrins
AU **Drummond, George S.**
CS Rockefeller Univ. Hosp., New York, NY, USA
SO Annals of the New York Academy of Sciences (1987), 514(Mech. Chem.-Induced Prophyrinopathies), 87-95
CODEN: ANYAA9; ISSN: 0077-8923
DT Journal; General Review
LA English
AB A review, with 19 refs., of work by the author and others over the last several years.

L12 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1988:403126 CAPLUS
DN 109:3126
TI Photophysical properties of tin-**porphyrins**: potential clinical implications
AU Delaney, John K.; Mauzerall, David; **Drummond, George S.**; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, USA
SO Pediatrics (1988), 81(4), 498-504
CODEN: PEDIAU; ISSN: 0031-4005
DT Journal
LA English
AB The photophys. properties of Sn-protoporphyrin and 2 of its synthetic analogs, Sn-mesoporphyrin and Sn-diiododeuteroporphyrin, were examined All 3 compds. are potent competitive inhibitors of heme oxygenase, the rate-limiting enzyme in the catabolism of heme to bilirubin, and can suppress completely or diminish significantly exptl. induced or naturally occurring forms of jaundice in animals or man. The results of these studies show that all 3 compds. have long-lived triplet states which are quenched by mol. O both in solution and when incorporated in liposomes. However, the addition of quenching groups such as I to the **porphyrin** macrocycle results in a marked (.apprx.60%) decrease in the triplet yield and a 3-fold decrease in the triplet lifetime. The triplet yield was shown to be independent of the excitation wavelength, and as a result, the metalloporphyrins were extremely poor photosensitizers when excited in the spectral region commonly used in phototherapy. In the presence of serum albumin, the triplet state of Sn-protoporphyrin was not quenched by O.

These results indicate that Sn-**porphyrins** can be custom designed with considerably reduced photosensitizing properties for potential clin. use as inhibitors of bilirubin production

L12 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:590327 CAPLUS
DN 107:190327
TI Reduction of the C2 and C4 vinyl groups of tin-protoporphyrin to form tin-mesoporphyrin markedly enhances the ability of the metalloporphyrin to inhibit in vivo heme catabolism
AU **Drummond, George S.**; Galbraith, Richard A.; Sardana, Mohinder K.; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Archives of Biochemistry and Biophysics (1987), 255(1), 64-74
CODEN: ABBIA4; ISSN: 0003-9861
DT Journal
LA English
AB Sn (tin)-mesoporphyrin (Sn-protoporphyrin in which the vinyl groups at C2 and C4 have been reduced to Et groups) when incubated with rat splenic microsomal heme oxygenase proved to be a potent competitive inhibitor of enzyme activity in vitro, with a Ki of 0.014 μM. Sn-mesoporphyrin (1 μmol/kg) also inhibited hepatic, renal, and splenic heme oxygenase activity in vivo in adult animals for extended periods of time. Sn-mesoporphyrin prevented the transient increase in serum bilirubin in ALA (δ-aminolevulinic acid)-induced hyperbilirubinemia in the 7-day-old suckling neonate. Tissue heme oxygenase activity was decreased in both animal models of hyperbilirubinemia. Sn-mesoporphyrin caused a prolonged increase in the heme saturation of hepatic tryptophan pyrrolase indicating an increase in the heme pool related to tryptophan pyrrolase and the compound also suppressed chemical induced hepatic porphyria. The administration of Sn-mesoporphyrin to bile duct-cannulated rats was followed by a prompt and sustained decrease in bilirubin output in bile. In addition the excretion of heme in bile was enhanced in these animals. These studies indicate that Sn-mesoporphyrin, like Sn-protoporphyrin, decreases serum bilirubin by inhibiting the production of bilirubin in vivo and its mode of action is through a sustained competitive inhibition of heme oxygenase. However, when a direct comparison of Sn-protoporphyrin and Sn-mesoporphyrin was made, these studies clearly established that the reduction of the C2 and C4 vinyl groups of the **porphyrin** macrocycle to Et groups increases the effectiveness of the Sn-mesoporphyrin derivative 10-fold or more as compared with Sn-protoporphyrin in inhibiting heme catabolism in the animal model systems examined Thus alterations in the side chain substituents as well as of the central metal atom can influence in a significant manner the potency of the resultant synthetic heme along as an agent capable of inhibiting heme degradation in vivo.

L12 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:502676 CAPLUS
DN 107:102676
TI Tin diiododeuteroporphyrin and therapeutic uses thereof, including hemolysis prevention
IN Rideout, Darryl; Kappas, Attallah; **Drummond, George S.**
PA Rockefeller University, USA
SO U.S., 5 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 4668670 | A | 19870526 | US 1986-876921 | 19860620 |
| | US 4692439 | A | 19870908 | US 1987-8869 | 19870129 |
| | US 4699903 | A | 19871013 | US 1987-8787 | 19870129 |
| | WO 8707837 | A1 | 19871230 | WO 1987-US939 | 19870421 |
| | W: AU, DK, JP, KR | | | | |
| | AU 8774812 | A1 | 19880112 | AU 1987-74812 | 19870421 |
| | AU 595047 | B2 | 19900322 | | |
| | JP 63502118 | T2 | 19880818 | JP 1987-503200 | 19870421 |
| | EP 249966 | A1 | 19871223 | EP 1987-108711 | 19870616 |

R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE

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|---|---|---|---|---|---|
| | DK 8800878 | A | 19880219 | DK 1987-888 | 19880219 |
| PRAI | US 1986-876921 | A3 | 19860620 | | |
| | US 1987-8787 | A | 19870129 | | |
| | US 1987-8869 | A | 19870129 | | |
| | WO 1987-US939 | A | 19870421 | | |

AB A pharmaceutical composition for parenteral administration comprises Sn diiododeuteroporphyrin (I) and an acceptable carrier. This composition inhibits heme metabolism in mammals, controls the rate of tryptophan metabolism, and increases the rate of heme and Fe excretion. I, administered parenterally in saline at 10 μmol/kg body weight to rats increased heme excretion in bile (44.9 vs. 22.9% of administered heme) when heme was simultaneously administered at 6.1 μmol/kg. Heme oxygenase activities in liver, kidney, and spleen were also lowered by the parenterally administered I.

L12 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:546241 CAPLUS
DN 105:146241
TI Metal protoporphyrins in the control of tryptophan metabolism
IN Kappas, Attallah; **Drummond, George S.**
PA Rockefeller University, USA
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 188277 | A2 | 19860723 | EP 1986-100426 | 19860114 |
| | EP 188277 | A3 | 19890405 | | |

R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

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|---|---|---|---|---|---|
| | US 4619923 | A | 19861028 | US 1985-691460 | 19850114 |
| | AU 8652207 | A1 | 19860717 | AU 1986-52207 | 19860113 |
| | AU 570144 | B2 | 19880303 | | |
| PRAI | US 1985-691460 | A | 19850114 | | |

AB Parenteral administrations of metal protoporphyrins control the rate of tryptophan metabolism in the liver. Sn-protoporphyrin and Cr-protoporphyrin cause increased saturation of trypotophan pyrrolase with heme; thereby the rate of tryptophan metabolism is increased. As a result there is less accumulation of tryptophan and serotonin in the brain. The opposite result is effected by administration of Co-protoporphyrin. There is a decrease in available heme in the liver, a decrease in the activity of tryptophan pyrrolase, and an increase in the amount of intact tryptophan and serotonin in the brain.

L12 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:106801 CAPLUS
DN 104:106801
TI Control of heme metabolism with synthetic metalloporphyrins
AU Kappas, Attallah; **Drummond, George S.**
CS Rockefeller Univ. Hosp., NY, 10021, USA
SO Journal of Clinical Investigation (1986), 77(2), 335-9
CODEN: JCINAO; ISSN: 0021-9738
DT Journal; General Review
LA English
AB A review with 38 refs. Synthetic metal-**porphyrin** complexes in which the central Fe atom of heme is replaced by other elements cannot be enzymically degraded to bile pigments. The central metal atom plays an important role in determining the physiol. and pharmacol. properties of metal-**porphyrin** complexes; the form in which animals and humans are exposed to trace metals, i.e., inorg., organified, **porphyrin** -chelated, etc., can be of great importance in determining the biol. responses that such elements elicit, especially with respect to actions on heme synthesis and degradation and cytochrome P 450 formation and function.

L12 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:101733 CAPLUS
DN 104:101733
TI Synthetic metalloporphyrins: a class of compounds of pharmacological

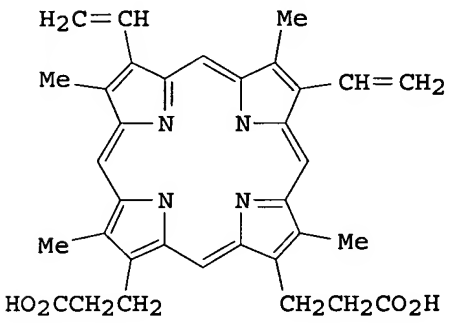
interest
AU Kappas, Attallah; **Drummond, George S.**
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO BioEssays (1985), 3(6), 256-9
CODEN: BIOEEJ; ISSN: 0265-9247
DT Journal; General Review
LA English
AB A review with 15 refs. Studies of the regulation of heme oxygenase [9059-22-7] by synthetic metalloporphyrins reveal that within this group of compds., there exist both inducers and inhibitors of the synthesis of this enzyme or of its catalytic function. The ability of metalloporphyrins to alter heme [14875-96-8] catabolism is of considerable exptl. and clin. interest since such alterations may have consequences for other aspects of heme homeostasis, including its synthesis and its function in the form of cytochrome(s) P 450. Examples of the metabolic effects- and their potential clin. and pharmacol. consequences-produced by two synthetic metalloporphyrins, Sn-protoporphyrin [14325-05-4] and Co-protoporphyrin [14325-03-2], are discussed.

L12 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1985:106048 CAPLUS
DN 102:106048
TI Sn-protoporphyrin rapidly and markedly enhances the heme saturation of hepatic tryptophan pyrrolase. Evidence that this synthetic metalloporphyrin increases the functional content of heme in the liver
AU Kappas, Attallah; **Drummond, George S.**; Sardana, Mohinder K.
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Journal of Clinical Investigation (1985), 75(1), 302-5
CODEN: JCINAO; ISSN: 0021-9738
DT Journal
LA English
AB Sn-protoporphyrin IX [14325-05-4] is a potent competitive inhibitor of heme oxygenase [9059-22-7], the rate-limiting enzyme in heme [14875-96-8] degradation to bile pigment, and has been utilized to suppress hyperbilirubinemia in jaundice in animals and man. In rats, Sn-protoporphyrin, in doses which entirely suppress neonatal hyuperbilirubinemia in the exptl. animal, leads to a rapid increase in the heme saturation of the heme-dependent enzyme tryptophan pyrrolase [9014-51-1] from normal levels of .apprx.50-60% to nearly 100%. The effect peaks at 1-2 h and lasts for at least 12 h. Sn-protoporphyrin is also able to block the rapid and marked decline in heme saturation of tryptophan pyrrolase elicited by inorg. Co, a potent inducer of heme oxygenase in liver. After the administration of Sn-protoporphyrin to the whole animal, therefore, a functionally active heme pool is rapidly increased in liver, confirming that the metalloporphyrin inhibits the degradation of endogenous heme by heme oxygenase.

L12 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1984:624234 CAPLUS
DN 101:224234
TI Control of heme and cytochrome P 450 metabolism by inorganic metals, organometals and synthetic metalloporphyrins
AU Kappas, Attallah; **Drummond, George S.**
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Environmental Health Perspectives (1984), 57, 301-6
CODEN: EVHPAZ; ISSN: 0091-6765
DT Journal
LA English
AB The heme [14875-96-8]-cytochrome P 450 complexes represent sensitive metabolic systems for examining the biol. impact of metals on important cellular functions. Many metals, both in the inorg. form and bound to organic moieties, potently induce-heme oxygenase [9059-22-7], the rate limiting enzyme of heme degradation The resulting increase in the rate of heme breakdown is reflected in a marked depression of cellular cytochrome P 450 [9035-51-2] content and impairment of the oxidative metabolism of natural and foreign chemical dependent on this hemoprotein. Organometal complexes do not mimic in all their aspects the actions of the inorg. elements which they contain. For example, organotins, in contrast to

inorg. Sn, produce a prolonged induction response of heme oxygenase in the liver but not in the kidney. Co-protoporphyrin [14325-03-2] is a much more potent inducer of heme oxygenase in liver than is inorg. Co, and Sn-protoporphyrin [14325-05-4] inhibits heme oxygenase activity nearly completely, whereas inorg. Sn is a powerful inducer of the renal enzyme. Contrasting effects on heme metabolism exist as well within the metalloporphyrin species as demonstrated by the effects in vivo of Co-protoporphyrin and Sn-protoporphyrin on heme oxygenase activity; the former induces the enzyme whereas the latter potently inhibits it. In vitro, however, both compds. competitively inhibit heme oxidation activity. These differences, among others which characterize metal actions in vivo and in vitro attest to the importance of pharmacokinetic, adaptive and other host factors in defining the responses of the heme-cytochrome P 450 systems to the impact of metals in the whole animal.

L12 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1984:603762 CAPLUS
DN 101:203762
TI Fluorometric measurement of tin-protoporphyrin in biological samples
AU Simionatto, Creuza S.; Anderson, Karl E.; Sassa, Shigeru; **Drummond, George S.**; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Analytical Biochemistry (1984), 141(1), 213-19
CODEN: ANBCA2; ISSN: 0003-2697
DT Journal
LA English
GI



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AB In order to study the disposition of Sn protoporphyrin (I) [14325-05-4] in vivo, a sensitive fluorometric method for the quantitation of this metalloporphyrin in biol. samples was developed. The method is sensitive to concns. as low as 0.01 nmol/mL, and is specific for Sn protoporphyrin even in the presence of other **porphyrins** such as protoporphyrin.

L12 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1984:465813 CAPLUS
DN 101:65813
TI An experimental model of postnatal jaundice in the suckling rat. Suppression of induced hyperbilirubinemia by Sn-protoporphyrin
AU **Drummond, George S.**; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Journal of Clinical Investigation (1984), 74(1), 142-9
CODEN: JCINAO; ISSN: 0021-9738
DT Journal
LA English
AB A model of exptl. postnatal hyperbilirubinemia in the rat was developed utilizing the heme [14875-96-8] precursor δ-aminolevulinic acid (ALA) [106-60-5] to produce jaundice a selective time period after birth. This time period is defined as that between 7 days postnatally, when the initial postpartum alterations of serum bilirubin [635-65-4] and heme metabolism in the neonate have subsided, and 21 days, when the hepatic conjugation mechanism for the bile pigment appears fully developed. Administration of ALA in this time period led to a rapid, consistent, and significant dose-dependent increase in serum bilirubin levels in the

newborn animals. Heme administration produced a qual. similar but enhanced effect. Both compds., in addition, induced a dose-dependent increase in hepatic heme oxygenase activity concomitant with the increase in serum bilirubin levels. Neither compound increased serum bilirubin levels significantly when administered at or after 21 days postnatally. Administration of the synthetic metalloporphyrin, Sn-protoporphyrin [14325-05-4], to ALA-treated neonates resulted in a dose-dependent decrease in serum bilirubin levels and hepatic heme oxygenase activity. Mn- [21393-64-6] and Zn-protoporphyrin [15442-64-5] in comparable doses did not significantly inhibit ALA-induced hyperbilirubinemia. Sn-protoporphyrin also inhibited the hyperbilirubinemia produced by heme in the suckling animals. ALA administration to newborn rats during the specific postnatal period described provides a simple and convenient model of exptl. jaundice in the developing neonate which permits an examination of the potential ability of synthetic metalloporphyrins or other compds. to suppress induced hyperbilirubinemia in the newborn animal. The ability to induce a consistent and significant degree of jaundice in the postnatal rat by the method described may also be useful for other types of studies concerned with the biol. disposition and effects of endogenously formed bilirubin in the neonate. Sn-protoporphyrin suppresses jaundice in the neonate. Suppression of heme oxidation by synthetic heme analogs may represent a useful therapeutic approach to the problem of severe hyperbilirubinemia in human premature newborn.

L12 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1982:15120 CAPLUS
DN 96:15120
TI Prevention of neonatal hyperbilirubinemia by tin protoporphyrin IX, a potent competitive inhibitor of heme oxidation
AU **Drummond, George S.**; Kappas, Attallah
CS Rockefeller Univ. Hosp., New York, NY, 10021, USA
SO Proceedings of the National Academy of Sciences of the United States of America (1981), 78(10), 6466-70
CODEN: PNASA6; ISSN: 0027-8424
DT Journal
LA English
AB The effects of various metalloporphyrins on hepatic heme oxygenase (EC 1.14.99.3) [9059-22-7] activity were examined in order to identify compds. that could inhibit heme degradation to bile pigment and might therefore be utilized to suppress the development of hyperbilirubinemia in the newborn. Among nine metal-protoporphyrin IX chelates (i.e., metal-hemes) studied, Sn-heme [14325-05-4], Mn-heme [21393-64-6], and Zn-heme [15442-64-5] substantially diminished heme oxygenase activity in vivo in the rat. These metalloporphyrins act as competitive inhibitory substrates in the heme oxygenase reaction but are not themselves oxidatively degraded. Sn-heme was the most potent enzyme inhibitor (Ki = 0.011 μM) in liver, spleen, kidney, and skin. Sn-heme administered to newborn animals within the first 72 h after birth blocked the postnatal increase in heme oxygenase activity that occurs in various tissues. Its effect on the enzyme levels was prompt and protracted. Sn-heme administration also entirely prevented the development of hyperbilirubinemia that normally occurs postnatally. The effect of the metalloporphyrin in lowering the increase concns. of serum bilirubin in neonates was prompt (within 1 day) and persisted throughout the 42 days after birth. No deleterious effects of Sn-heme treatment of the newborn was observed This demonstrates that a synthetic metalloporphyrin that is a potent competitive inhibitor of heme oxidation can, when administered to the newborn, also prevent the hyperbilirubinemia that normally develops postnatally. The potential clin. implications of these findings are evident, and it is suggested that the pharmacol. properties of Sn-heme are related synthetic metalloporphyrins merit further study.

L12 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1981:563007 CAPLUS
DN 95:163007
TI Porphyrogenic effects and induction of heme oxygenase in vivo by δ-aminolevulinic acid
AU Anderson, Karl E.; **Drummond, George S.**; Freddara, Umberto; Sardana, Mohinder K.; Sassa, Shigeru

CS Rockefeller Univ., New York, NY, 10021, USA
SO Biochimica et Biophysica Acta, General Subjects (1981), 676(3), 289-99
CODEN: BBGSB3; ISSN: 0304-4165
DT Journal
LA English
AB The effects of single large doses of the **porphyrin**-heme precursor δ-aminolevulinic acid [106-60-5] on tissue **porphyrins** and on δ-aminolevulinate synthase [9037-14-3] and heme oxygenase [9059-22-7], the rate-limiting enzymes of liver heme synthesis and degradation resp., were studied in the chick embryo in ovo, in the mouse, and in the rat. δ-Aminolevulinic acid treatment produced a distinctive pattern characterized by extensive tissue **porphyrin** accumulation and alterations in these rate-limiting enzymes in the liver. Repression of basal or allylisopropylacetamide-induced liver δ-aminolevulinate synthase was observed and, in the mouse and the rat, induction of liver heme oxygenase after δ-aminolevulinic acid treatment, in a manner similar to the known effects of hemin on these enzymes. In the chick embryo liver in ovo heme oxygenase was substantially higher than in rat and mouse liver, and was not induced by δ-aminolevulinic acid or other compds., including hemin, CS2 and CoCl2. Levulinic acid [123-76-2], an analog of δ-aminolevulinic acid, did not induce heme oxygenase in mouse liver. δ-Aminolevulinic acid treatment did not impair ferrochelatase activity but was associated with slight and variable decreases in liver cytochrome P-450 [9035-51-2]. Treatment of chick embryos with a small priming dose of 1,4-dihydro-3,5-dicarbethoxycollidine [632-93-9], which impairs liver ferrochelatase activity, accentuated **porphyrin** accumulation after δ-aminolevulinic acid in the liver. Apparently, exogenous δ-aminolevulinic acid is metabolized to **porphyrins** in a number of tissues and, at least in the liver, to a physiol. significant amount of heme, thereby producing an increase in the size of one or more of the heme pools that regulate both heme synthesis and degradation

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(FILE 'HOME' ENTERED AT 16:35:55 ON 06 APR 2006)

FILE 'REGISTRY' ENTERED AT 16:36:04 ON 06 APR 2006
L1 STRUCTURE UPLOADED
L2 50 S L1 SSS SAM
L3 26394 S L1 SSS FULL
L4 57 S L3 AND SN/ELS
L5 STRUCTURE UPLOADED
L6 0 S L5 SSS SAM SUB=L4
L7 0 S L5 FULL SUB=L4

FILE 'CAPLUS' ENTERED AT 16:41:26 ON 06 APR 2006
L8 0 S L4 AND (AMINO(A)ACID)
L9 1 S L4 AND PROCESS
L10 7 S LEVINSON BENJAMIN/AU
L11 72 S DRUMMOND GEORGE S/AU
L12 23 S L11 AND PORPHYRIN